amsbio

Assay Kits and Proteins for Drug Discovery

PARP
UBIQUITINATION
EPIGENETICS
KINASES
PHOSPHATASES

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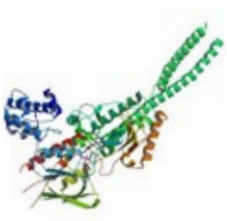
HISTONE & DNA METHYLATION

Epigenetic regulation of transcription is governed by DNA methylation and post-translational histone modifications. Histone methyltransferases (HMTs) and histone demethylases are critical for transcriptional regulation in both normal and diseased states, and are important targets for drug discovery.



DNA Methylation

Assay Kits	Cat. No.	Size
DNMT Universal Chemiluminescent Assay Kit	AMS.52035	96 rxns
DNMT1 Chemiluminescent Assay Kit	AMS.52050L	96 rxns
DNMT3A Chemiluminescent Assay Kit	AMS.52033	96 rxns
DNMT3B Chemiluminescent Assay Kit	AMS.52034	96 rxns
DOT1L (KMT4) Chemiluminescent Assay Kit	AMS.52202	96 rxns
EHMT1/GLP Chemiluminescent Assay Kit	AMS.53007	96 rxns
EZH1 Chemiluminescent Assay Kit	AMS.52079	96 rxns
EZH2 (A677G) Chemiluminescent Assay Kit	AMS.52077	96 rxns
EZH2 (Y641F) Chemiluminescent Assay Kit	AMS.52075	96 rxns
EZH2 (Y641N) Chemiluminescent Assay Kit	AMS.52076	96 rxns
EZH2 (Y641N) TR-FRET Assay Kit	AMS.52078	384 rxns
EZH2 Chemiluminescent Assay Kit	AMS.52009L	96 rxns
EZH2 Homogeneous Assay Kit	AMS 52059	384 rxns
G9a Chemiluminescent Assay Kit	AMS.52001L	96 rxns
G9a Homogeneous Assay Kit	AMS.52051	384 rxns
Histone H3(K9) Universal Methyltransferase New Assay Kit	AMS.52072	96 rxns
Histone H4(R3) Methyltransferase Assay Kit	AMS.52074	96 rxns
MLL1 Complex Chemiluminescent Assay Kit	AMS.53008	96 rxns
NSD1 Chemiluminescent Assay Kit	AMS.53010	96 rxns
NSD2 Chemiluminescent Assay Kit	AMS.53009	96 rxns
PRMT1 Chemiluminescent Assay Kit	AMS.52004L	96 rxns
PRMT1 Homogeneous Assay Kit	AMS.52054	384 rxns
PRMT3 Chemiluminescent Assay Kit	AMS.52005L	96 rxns

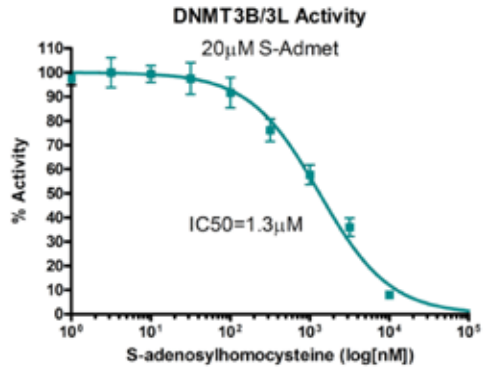


Figure 1. *Determination of the IC50 of S-Adenosylmethionine on DNMT3B/3L (Cat. #AMS.51104), measured with the DNMT3B Assay Kit (Cat. #AMS.52034).*

DNA Methylation continued

Assay Kits	Cat. No.	Size
PRMT3 Homogeneous Assay Kit	AMS.52055	384 rxns
PRMT4 Chemiluminescent Assay Kit	AMS.52041L	96 rxns
PRMT5 Chemiluminescent Assay Kit	AMS.52002L	96 rxns
PRMT5 Homogeneous Assay Kit	AMS.52052	384 rxns
PRMT8 Homogeneous Assay Kit	AMS.52058	384 rxns
SETD2 Chemiluminescent Assay Kit	AMS.52060	96 rxns
SetDB1 Chemiluminescent Assay Kit	AMS.51056	96 rxns
SUV39H1 Chemiluminescent Assay Kit	AMS.52006L	96 rxns
SUV39H2 Chemiluminescent Assay Kit	AMS.52008	96 rxns
SUV4-20H1 Chemiluminescent Assay Kit	AMS.53011	96 rxns
EZH2 (A738T) Chemiluminescent Assay Kit	AMS.52067	96 rxns
EZH2-EED Binding Assay Kit	AMS.52066	384 rxns
Histone H3 Dimethyl-K27 ELISA Detection Kit	AMS.53030	96 rxns
NSD3 Chemiluminescent Assay Kit	AMS.53012	96 rxns
PRMT4 Homogeneous Assay Kit	AMS.52068	384 rxns
PRMT5 Chemiluminescent Assay Kit	AMS.52073	384 rxns
PRMT5 TR-FRET Assay Kit	AMS.52171	384 rxns
PRMT6 (HRMT1L6) Chemiluminescent Assay Kit	AMS.52046	96 rxns
PRMT6 (HRMT1L6) Homogeneous Assay Kit	AMS.52056	384 rxns
PRMT8 Chemiluminescent Assay Kit	AMS.52062	96 rxns
PRMT9 Homogeneous Assay Kit	AMS.52069	384 rxns
SMYD2 (KMT3C) Chemiluminescent Assay Kit	AMS.51031	96 rxns
SMYD3 Homogeneous Assay Kit	AMS.52063	384 rxns
SMYD4 Chemiluminescent Assay Kit	AMS.53013	96 rxns

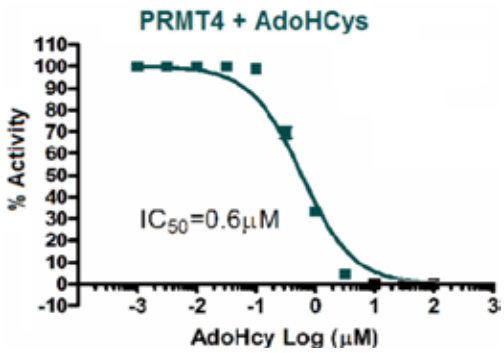


Figure 2. *PRMT4/CARM1 (Cat. #AMS.51047) inhibition by S-adenosyl-homocysteine, measured using the PRMT4 Assay Kit (Cat. #AMS.52041L).*

Assay Kits Components

Assay Kit Components	Cat. No.	Size
4x DNMT Assay Buffer 1	AMS.52200	30 ml
4x DNMT Assay Buffer 2	AMS.52201	30 ml
4x HMT Assay Buffer 1	AMS.52160	30 ml
4x HMT Assay Buffer 1	AMS.52160-A	30 ml
4x HMT Assay Buffer 2	AMS.52170	30 ml
4x HMT Assay Buffer 2A	AMS.52170-A	30 ml
4x HMT Assay Buffer 3	AMS.52180	30 ml
4x HMT Assay Buffer 4	AMS.52190	30 ml
4x HMT Assay Buffer 5	AMS.52191	30 ml
4x HMT Assay Buffer 6	AMS.52192	30 ml
4x HMT Assay Buffer 7	AMS.52193	30 ml
Anti- Adenosyl Homocysteine Antibody	AMS.52030	1 ml
Anti-Dimethyl Histone H3 (Lys27) Monoclonal, Primary Antibody 6	AMS.52140F	25 µl
Anti-JMJD1A, Primary Antibody 17	AMS.52140Q	25 µl
Anti-JMJD2, Primary Antibody 5	AMS.52140E	40 µl
Anti-Trimethyl Histone H3 (Lys27) Monoclonal	AMS.52140C-100	100 µl
Anti-Trimethyl Histone H3 (Lys27) Monoclonal	AMS.52140C-500	500 µl
Blocking Buffer 1	AMS.52100	50 ml
S-adenosyl homocysteine, Fluorescein-labeled	AMS.52012	20 µl
Secondary Anti-HRP-labeled Antibody 2	AMS.52131H	10 µl

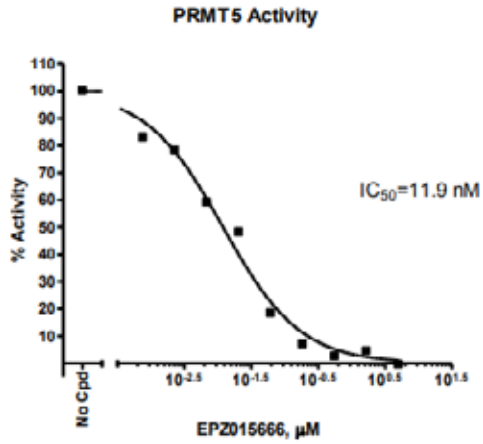


Figure 3. *PRMT5 enzyme activity, measured using the PRMT5 Chemiluminescent Assay Kit, #AMS.52002L. Luminescence was measured using a Bio-Tek fluorescent microplate reader.*

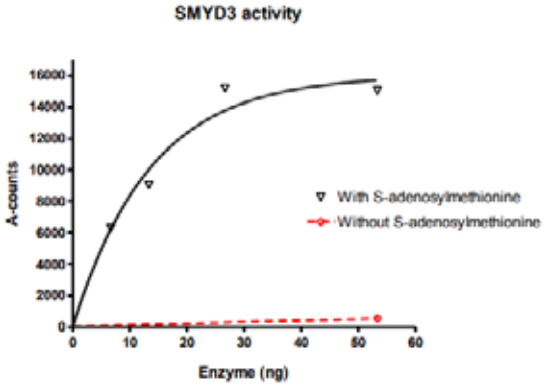


Figure 4. *SMYD3 enzyme activity, measured using the SMYD3 Homogeneous Assay Kit, Cat. #AMS.52063*

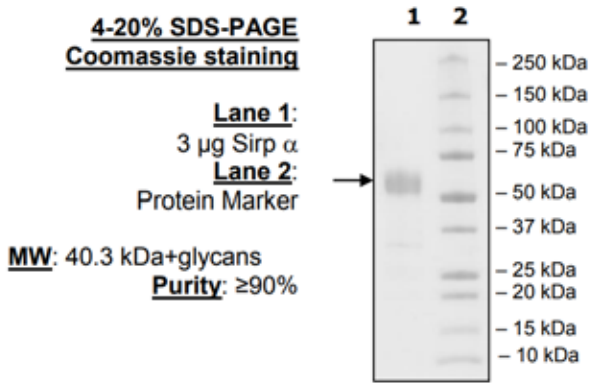


Figure 5. *Histone H2B, Cat. #AMS.52022*

Methylation Enzymes

AMSBIO supplies the most extensive line of methylation-related enzymes available. These highly active enzymes are suitable for enzymatic profiling, inhibitor screening assays, and drug discovery.

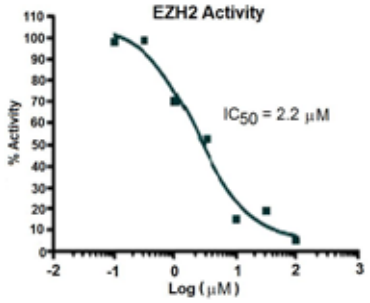


Figure 6. *EZH2 Complex (Cat. #AMS.51004) inhibition by S-adenosyl-homocysteine, measured using the EZH2 Assay Kit, Cat. #AMS.52059.*

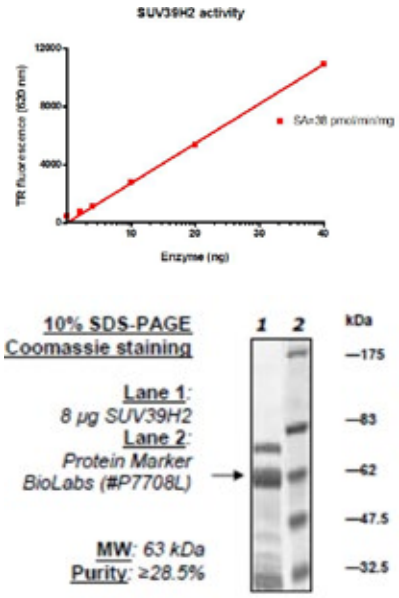


Figure 7. *Activity, measured with the SUV39H2 Direct Activity Assay Kit (Cat. #AMS.52008) and purity of SUV39H2 (Cat. #AMS.51080) lysine methyltransferase.*

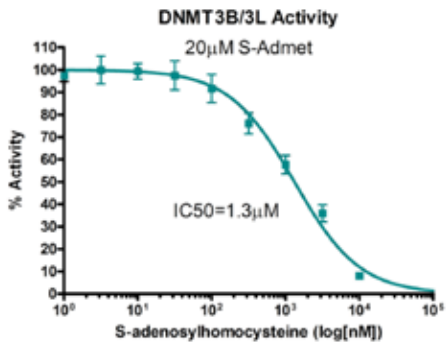


Figure 8. *Determination of the IC50 of S-Adenosylmethionine on DNMT3B/3L (Cat. #AMS.51104), measured with the DNMT3B Assay Kit (Cat. #AMS.52034).*

Enzymes	Cat. No.	Size
AEBP2, His-tag	AMS.50281	50 µg
CoREST, His-tag	AMS.50274	100 µg
DNMT1, GST-tag	AMS.51101	10 µg
DNMT1, His-FLAG-tags	AMS.51100	10 µg
DNMT2, GST-tag	AMS.51102	10 µg
DNMT3a, GST-tag	AMS.51103	10 µg
DNMT3A/DNMT3L Complex, His-tag, GST-tag	AMS.51106	10 µg
DNMT3B/DNMT3L Complex, GST-tag, His-tag	AMS.51109	10 µg
DNMT3B/DNMT3L Complex, His-tag, GST-tag	AMS.51104	10 µg
DOT1L (KMT4), GST-tag	AMS.51005	50 µg
EED, FLAG-tag	AMS.50280	50 µg
EHMT1 (GLP), GST-tag	AMS.51020	50 µg
EZH1/EED/SUZ12, His-tag	AMS.51006	50 µg
EZH1/EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51007	50 µg
EZH2 (A677G)/EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51037	20 µg
EZH2 (A677T)/EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51039	20 µg
EZH2 (A687V)/EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51038	20 µg
EZH2 (A738T) /EED/SUZ12/RbAp48/AEBP2, FLAG-Tag, HisTag	AMS.51061	20 µg
EZH2 (del153Y)/EED/SUZ12/RbAp48/AEBP2, FLAG, His-tag	AMS.51027	20 µg
EZH2 (E740K)/EED/SUZH12/RbAp48/AEBP2, FLAG-tag, Histag	AMS.51032	20 µg
EZH2 (F667I)/EED/SUZH12/RbAp48/AEBP2, FLAG-tag, Histag	AMS.51035	20 µg
EZH2 (H689Y)/EED/SUZ12/RbAp48/AEBP2, FLAG-tag, Histag	AMS.51023	20 µg
EZH2 (non-complexed), His-GST-tags	AMS.50279	20 µg
EZH2 (P132S)/EED/SUZ12/RbAp48/AEBP2, FLAG-tag, Histag	AMS.51019	20 µg
EZH2 (R679C)/EED/SUZH12/RbAp48/AEBP2, FLAG-tag, Histag	AMS.51033	20 µg
EZH2 (Y641C) /EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51029	20 µg
EZH2 (Y641F) /EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51017	20 µg
EZH2 (Y641H) /EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51011	20 µg
EZH2 (Y641N) /EED/SUZ12/RbAp48/AEBP2, His-tag, FLAGtag	AMS.51028	20 µg
EZH2 (Y641S) /EED/SUZ12/RbAp48/AEBP2, His-tag	AMS.51013	20 µg
EZH2 / EED / SUZ12, His-tag, FLAG-tag	AMS.51003	50 µg
EZH2/EED, His-tag, FLAG-tag	AMS.51002	20 µg
EZH2/EED/SUZ12/RbAp48, His-tag, FLAG-tag	AMS.51099	50 µg
EZH2/EED/SUZ12/RbAp48/AEBP2, FLAG-tag, His-tag	AMS.51004	50 µg
EZH2/SUZ12/RbAp48, His-GST-tags, His-tag	AMS.51098	20 µg
G9a (EHMT2), GST-tag (E. coli-derived)	AMS.51000	50 µg

Methylation Enzymes continued

Enzymes	Cat. No.	Size
G9a (EHMT2), GST-tag (Sf9-derived)	AMS.51001	20 µg
MECP2, GST-tag	AMS.50250	50 µg
Metnase (SETMAR), FLAG-tag	AMS.51018	20 µg
MLL1/WDR5/Ash2L/RbBP5 (MLL1/WAR Complex), His-tag	AMS.51022	50 µg
MLL1/WDR5/Ash2L/RbBP5/DPY30 (MLL1/WARD Complex),FLAG, His-tag	AMS.51021	50 µg
Mouse DNMT3B, His-tag, FLAG-tag	AMS.51105	10 µg
NSD1, GST-tag	AMS.51024	50 µg
NSD2 (catalytic domain), GST-tag	AMS.51026	50 µg
NSD3 (1021-1322) (WHSC1L1), GST-tag	AMS.51036	50 µg
PRDM12, GST-tag	AMS.50320	50 µg
PRDM14, GST-tag	AMS.50321	50 µg
PRMT1, GST-tag (E. coli-derived)	AMS.51040	50 µg
PRMT1, GST-tag (Sf9-derived)	AMS.51041	20 µg
PRMT3, GST-tag	AMS.51043	50 µg
PRMT4 (CARM1), FLAG-tag (HEK293-derived)	AMS.51047	20 µg
PRMT5/MEP50, Biotin-Labeled	AMS.52102	20 µg
PRMT5/MEP50, FLAG-tag, His-tag (HEK293-derived)	AMS.51045	20 µg
PRMT5/MEP50, FLAG-tag, His-tag (Sf9-derived)	AMS.51048	20 µg
PRMT6 (HRMT1L6), His-tag	AMS.51049	20 µg
PRMT7, FLAG-tag	AMS.51054	20 µg
PRMT8, His-FLAG-tags	AMS.51052	20 µg
Set7/9 (Sf9), His-GST-tags	AMS.50019	50 µg
Set7/Set9, GST-tag (E. coli-derived)	AMS.51010	100 µg
Set8, Active, GST-tag	AMS.51008	50 µg
SETD2, GST-tag	AMS.53019	50 µg
SetDB1, His-GST-tags	AMS.51055	20 µg
SMYD2 (KMT3C), FLAG-tag	AMS.51014	20 µg
SMYD3 (35-end), GST-tag	AMS.51015	20 µg
SMYD3 (full length), FLAG-tag	AMS.51016	20 µg
SMYD4, FLAG-tag	AMS.51057	20 µg
SUV39H1, Full Length, GST-tag	AMS.51071	5 µg
SUV39H1, GST-tag	AMS.51070	50 µg
SUV39H2, GST-tag	AMS.51080	50 µg
SUV4-20H1, GST-tag	AMS.51090	50 µg
SUV4-20H2, GST-tag	AMS.51060	50 µg
SUZ12, His-FLAG-tags	AMS.50282	20 µg
WDR5, FLAG-tag	AMS.51111	100 µg
WDR5, His-tag	AMS.71200	100 µg
WDR5, His-Tag, Biotin-Labeled	AMS.80016	50 µg

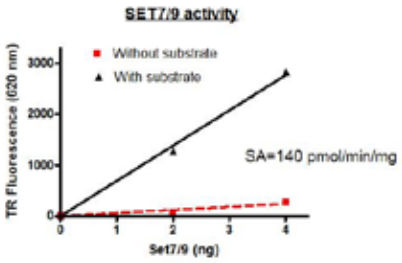


Figure 9. *SET7/9 (Cat. #AMS.51010) lysine methyltransferase activity, measured in the presence (■) or absence (n) of S-adenosylmethionine.*

Substrates

AMSBIO offers both substrates for histone methyltransferases (HMTs) and histone demethylases, as well as inhibitors for HMTs. These products are useful in screening small molecule activity.

Substrates	Cat. No.	Size
400 µM S-Adenosylmethionine	AMS. 52120	250 µL
Core Histone Octamers	AMS.52065	0.6 mg
Histone H1, Full Length, His-tag	AMS.52042	1 mg
Histone H1, Full Length, His-tag	AMS.52043	100 µg
Histone H2a, Full Length, Biotin-labeled, His-tag	AMS.52036	0.5 mg
Histone H2a, Full Length, Biotin-labeled, His-tag	AMS.52049	50 µg
Histone H2a, Full Length, His-tag	AMS.52025	100 µg
Histone H2a, Full Length, His-tag	AMS.52021	1 mg
Histone H2b, Full Length, His-tag	AMS.52026	100 µg
Histone H2b, Full Length, His-tag	AMS.52022	1 mg
Histone H3	AMS.79055-2	1 mg
Histone H3	AMS.79055-1	100 µg
Histone H3 (2-58), GST-tag	AMS.52013	500 µg
Histone H3 (K27M), His-tag	AMS.52101	100 µg
Histone H3 K27C, Full Length, His-tag	AMS.52080	100 µg
Histone H3 K27cMe1, Full Length, His-tag	AMS.52081	100 µg
Histone H3 K27cMe2, Full Length, His-tag	AMS.52082	100 µg
Histone H3 peptide (1-21)	AMS.52010	160 nmole
Histone H3 peptide (1-21), Biotin-labeled	AMS.52011	80 nmole
Histone H3 peptide (21-44)	AMS.52016	160 nmole
Histone H3 peptide (21-44), Biotin-labeled	AMS.52017	80 nmole
Histone H3 Peptide (21-44), Monomethyl K27, Biotin-labeled	AMS.52020	40 nmole
Histone H3, Full Length, Biotin-labeled, His-tag	AMS.52047	0.5 mg
Histone H3, Full Length, Biotin-labeled, His-tag	AMS.52053	50 µg
Histone H3, Full Length, His-tag	AMS.52027	100 µg
Histone H3, Full Length, His-tag	AMS. 52023	1 mg

Substrates continued

Substrates	Cat. No.	Size
Histone H3-H4 Tetramer H3K27C Unmodified, His-tag	AMS.52084	50 µg
Histone H3-H4 Tetramer H3K27cMe2, His-tag	AMS. 52086	50 µg
Histone H3/H4 Tetramer (full length), His-tag	AMS.52064-2	100 µg
Histone H3/H4 Tetramer (full length), His-tag	AMS.52064-1	50 µg
Histone H4 (2-58), GST-tag	AMS.52019	500 µg
Histone H4 peptide (1-21)	AMS.52014	160 nmole
Histone H4 peptide (1-21), Biotin-labeled	AMS.52018	80 nmole
Histone H4 peptide (1-21), Dimethyl R3, Biotin-labeled	AMS.51200	500 µl
Histone H4, Full Length, His-tag	AMS.52024	1 mg
Histone H4, Full Length, His-tag	AMS.52028	100 µg
Histone Octamer (Full length)	AMS.52040	100 µg
Histone Octamer (full length), His-tag	AMS.52037	100 µg
Histone Octamer H3K27C Unmodified, His-tag	AMS.52088	50 µg
Histone Octamer H3K27cMe2, His-tag	AMS.52090	50 µg
Histone Octamer, Biotin-labeled, His-tag	AMS.52061	50 µg
MECP2, GST-tag	AMS.50250	50 µg
Native nucleosome (HEK293-derived)	AMS.52015	0.6 mg
Native Nucleosome (HeLa-derived)	AMS.52039	0.6 mg
PRMT4 peptide substrate, Biotin-labeled	AMS.50352	80 nmole
PRMT9, FLAG-Tag, Strep-Tag	AMS.52057	20 µg
Recombinant Nucleosome (E. coli-derived)	AMS.52038	20 µg
Recombinant Nucleosome (E. coli-derived), Biotin-labeled, His-tag	AMS.52048	20 µg

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
3-Deazaneplanocin (DZNep)	AMS.27617-1	5 mg
3-Deazaneplanocin (DZNep)	AMS.27617-2	10 mg
3-Deazaneplanocin A (DZNep) hydrochloride	AMS.27618-1	5 mg
3-Deazaneplanocin A (DZNep) hydrochloride	AMS.27618-2	10 mg
AMI-1 (sodium salt)	AMS.27307	25 mg
Azacytidine (Vidaza)	AMS.27107	50 mg
BIX01294 (hydrochloride hydrate)	AMS.27220	10 mg
Chaetocin	AMS.27221	1 mg
CTPB	AMS.27050	1 mg
Ellagic acid	AMS.27219	100 mg
Entacapone	AMS.27621-1	10 mg
Entacapone	AMS.27621-2	100 mg
EPZ-6438	AMS.27626-2	50 mg
EPZ-6438	AMS.27626-3	100 mg
EPZ-6438	AMS.27626-1	20 mg
EPZ004777	AMS.27622	5 mg
EPZ005687	AMS.27624-2	25 mg
EPZ005687	AMS.27624-1	5 mg
EPZ015666	AMS.79043-1	5 mg

Inhibitors / Activators continued

Inhibitors/Activators	Cat. No.	Size
EPZ015666	AMS.79043-2	25 mg
EPZ5676	AMS.27625-1	10 mg
EPZ5676	AMS.27625-2	50 mg
Histone-H2A-(107-122)-Ac-OH	AMS.27628-1	1 mg
Histone-H2A-(107-122)-Ac-OH	AMS.27628-2	5 mg
S-adenosyl homocysteine	AMS.52031	250 µL
SGC 0946	AMS.27649-1	10 mg
SGC 0946	AMS.27649-2	50 mg
UNC0224	AMS.27303	10 mg
UNC0321 (TFA salt)	AMS.27306	50 mg
UNC0638	AMS.27222	5 mg

HISTONE DEMETHYLASES

AMSBIO offers a unique portfolio of epigenetic assay kits for methylation research, including enzyme activity assays for histone demethylation (LSD1, JMJD2A-C), and histone methylation of arginine (PRMT) or lysine (EZH2, G9a, Set7/9, SUV39H1/2). These simple, sensitive assays provide precise measurement of methylation activity for drug discovery research.

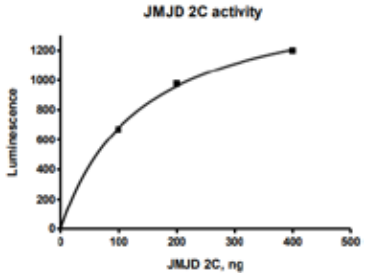


Figure 10. *JMJD2C enzyme activity, measured using the JMJD2C Chemiluminescent Assay Kit, Cat. #AMS.50405.*

Demethylase Assay Kits

Assay Kits	Cat. No.	Size
FBXL10 (KDM2B) Homogeneous Assay Kit	AMS.50610	384 rxns
FBXL11 (KDM2A) Homogeneous Assay Kit	AMS.50611	384 rxns
JARID1A (KDM5A) Homogeneous Assay Kit	AMS.50510	384 rxns
JARID1B (KDM5B) Homogeneous Assay Kit	AMS.50512	384 rxns
JARID1C (KDM5C) Homogeneous Assay Kit	AMS.50511	384 rxns
JHDM1D (KDM7A) Homogeneous Assay Kit	AMS.50420	384 rxns
JMJD1A (KDM3A) Homogeneous Assay Kit	AMS.50412	384 rxns
LSD1 (KDM1A) Chemiluminescent Assay Kit	AMS.50109	96 rxns
LSD1 (KDM1A) Fluorescent Assay Kit	AMS.50107	384 rxns
LSD1 (KDM1A) Fluorescent Assay Kit	AMS.50106	96 rxns
LSD1 (KDM1A) Homogeneous Assay Kit	AMS.50108	384 rxns
FBXL10 (KDM2B) Chemiluminescent Assay Kit	AMS.50157	96 rxns
JARID1A (KDM5A) Chemiluminescent Assay Kit	AMS.50513	96 rxns
JARID1B (KDM5B) Chemiluminescent Assay Kit	AMS.50517	96 rxns

Demethylase Assay Kits continued

Assay Kits	Cat. No.	Size
JARID1B (KDM5B) TR-FRET Assay Kit	AMS.50514	384 rxns
JHDM1D (KDM7A) Chemiluminescent Assay Kit	AMS.50612	96 rxns
JMJD2A (KDM4A) Homogeneous Assay Kit	AMS.50413	384 rxns
JMJD2B (KDM4B) Homogeneous Assay Kit	AMS.50414	384 rxns
JMJD2C (KDM4C) Chemiluminescent Assay Kit	AMS.50405	96 rxns
JMJD2C (KDM4C) Homogeneous Assay Kit	AMS.50415	384 rxns
JMJD2D (KDM4D) Chemiluminescent Assay Kit	AMS.50418	96 rxns
JMJD2E (KDM4DL) Homogeneous Assay Kit	AMS.50417	384 rxns
JMJD3 (KDM6B) Chemiluminescent Assay Kit	AMS.50406	96 rxns
JMJD3 (KDM6B) Homogeneous Assay Kit	AMS.50416	384 rxns
LSD2(KDM1B) Homogeneous Assay Kit (Dimethyl)	AMS.50614	384 rxns
LSD2(KDM1B) Homogeneous Assay Kit (Monomethyl)	AMS.50613	384 rxns
PHF8 (KDM7B) Homogeneous Assay Kit	AMS.50515	384 rxns
TET1 Chemiluminescent Assay Kit	AMS.50651	96 rxns
TET2 Chemiluminescent Assay Kit	AMS.50652	96 rxns
UTX Chemiluminescent Assay Kit	AMS.50615	96 rxns

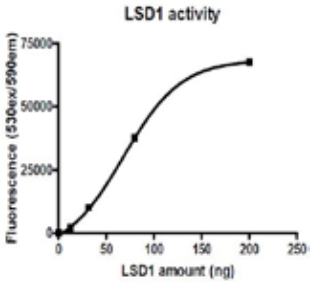


Figure 11. *LSD1 (Cat. #AMS.50100) demethylase activity measured with the LSD1 Fluorescent Assay Kit, Cat. #AMS.50106.*

Demethylase Assay Kit Components

Assay Kit Components	Cat. No.	Size
2x LSD1 Buffer 1	AMS.50098	10 ml
3x LSD1 Buffer 2	AMS.50099	10 ml
4x DMT Detection Buffer 1	AMS.52301	10 ml
4x HDM Assay Buffer 1	AMS.52406	10 ml
4x HDM Assay Buffer 2	AMS.52407	10 ml
4x HDM Assay Buffer 3	AMS.52408	10 ml
4x HDM Assay Buffer 4	AMS.52409	10 ml
4x HDM Incomplete Assay Buffer	AMS.52410	10 ml
Anti-Dimethyl Histone H3 (Lys27) Monoclonal, Primary Antibody 6	AMS.52140F	25 µl
Anti-JMJD1A, Primary Antibody 17	AMS.52140Q	25 µl
Anti-JMJD2, Primary Antibody 5	AMS.52140E	40 µl
Blocking Buffer 1	AMS.52100	50 ml
Secondary Anti-HRP-labeled Antibody 2	AMS.52131H	10 µl

Demethylase Enzymes

Enzymes	Cat. No.	Size
FBXL10 (KDM2B, JHDM1B), FLAG-tag	AMS.50120	20 µg
FBXL11 (KDM2A, JHDM1A), FLAG-Avi-tags	AMS.50156	20 µg
JARID1A (KDM5A), FLAG-tag	AMS.50110	20 µg
JARID1A (KDM5A), His-Avi-tags, FLAG-tag	AMS.50155	20 µg
JARID1B (KDM5B), Full Length, FLAG-tag	AMS.50128	20 µg
JARID1B (KDM5B, PLU-1), His-FLAG-tags	AMS.50121	20 µg
JARID1C(KDM5C), FLAG-tag	AMS.50112	20 µg
JHDM1D (KDM7A), FLAG-tag	AMS.50419	20 µg
JMJD1A (KDM3A), FLAG-tag	AMS.50130	20 µg
JMJD1B (KDM3B), FLAG-tag	AMS.50421	20 µg
JMJD2A(KDM4A) (1-350), His-tag	AMS.50123	100 µg
JMJD2B (KDM4B), GST-tag	AMS.50111	100 µg
JMJD2B(KDM4B) , FLAG-tag	AMS.50104	100 µg
JMJD2C(KDM4C), GST-tag	AMS.50105	100 µg
JMJD2D (KDM4D), GST-tag	AMS.50117	100 µg
JMJD2E (KDM4DL), GST-tag	AMS.50118	100 µg
JMJD3 (KDM6B), FLAG-tag	AMS.50115	20 µg
JMJD6, GST-tag	AMS.50140	20 µg
LSD1 (KDM1A), Variant 2	AMS. 50097	50 µg
LSD1 (KDM1A), Variant 2, GST-tag	AMS.50100	50 µg
LSD2 (KDM1B), GST-Tev-Tag	AMS.50124	20 µg
Mouse JARID1B (KDM5B, PLU-1), FLAG-tag	AMS.50122	20 µg
PHF8 (KDM7B), (2-525), FLAG-tag	AMS.50131	20 µg
PHF8 (KDM7B), Full-length, FLAG-tag	AMS.50132	20 µg
TET1, FLAG-tag	AMS.50161	50 µg
TET2, FLAG-His-tag	AMS.50162	50 ug
TET3, FLAG-Tag, His-Tag	AMS.50163	50 µg
UTX (KDM6A), C-term FLAG-tag	AMS.50116	20 µg
UTX (KDM6A), N-terminal FLAG-tag	AMS.50119	20 µg

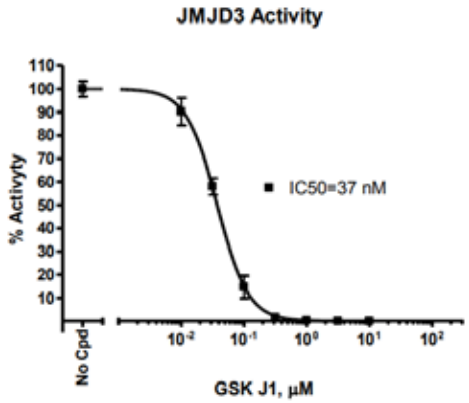


Figure 12. *JMJD3 (KDM6B) enzyme activity, measured using the JMJD3 hemiluminescent Assay Kit, Cat. #AMS.50406*

Substrates

Substrates	Cat. No.	Size
Histone H3 K27cMe1, Full Length, His-tag	AMS.52081	100 µg
Histone H3 K27cMe2, Full Length, His-tag	AMS.52082	100 µg
Histone H3 K27cMe3, Full Length, His-tag	AMS.52083	100 µg
Histone H3 peptide (1-21), Dimethyl K9, Biotin-labeled	AMS.50351	500 µl
Histone H3 peptide (1-21), Monomethyl K9, Biotin-labeled	AMS.50353	500 µl
Histone H3 peptide (1-21), Trimethyl K9, Biotin-labeled	AMS.50350	500 µl
Histone H3-H4 Tetramer H3K27cMe2, His-tag	AMS.52086	50 µg
Histone H3-H4 Tetramer H3k27cMe3, His-tag	AMS.52087	50 µg
Histone Octamer H3K27cMe2, His-tag	AMS.52090	50 µg
Histone Octamer H3K27cMe3, His-tag	AMS.52091	50 µg
LSD1 Substrate	AMS.50101	500 µl

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
GSK J4 HCl	AMS.27627-2	50 mg
GSK J4 HCl	AMS.27627-1	10 mg
OG-L002	AMS.27635-1	5 mg
OG-L002	AMS.27635-2	25 mg
Posaconazole	AMS.27639-2	25 mg
Posaconazole	AMS.27639-1	5 mg
Tranylcypromine (2-PCPA)	AMS.27305	100 mg

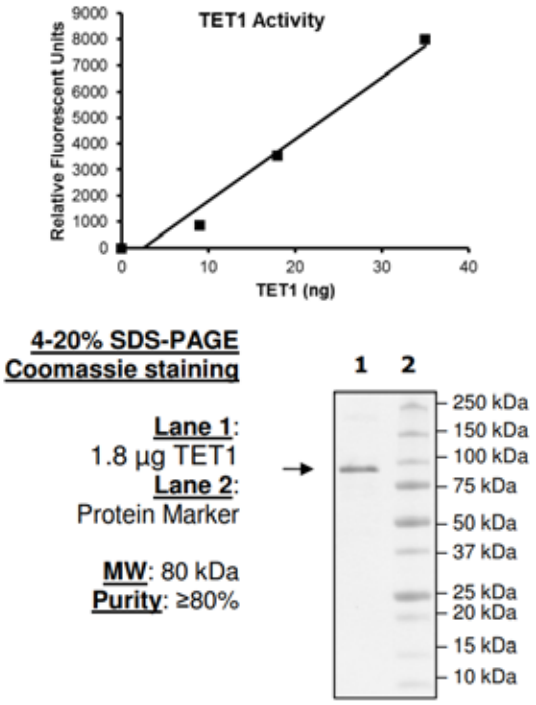


Figure 13. *TET1 activity and quality control Cat. #AMS.AMS.50161*

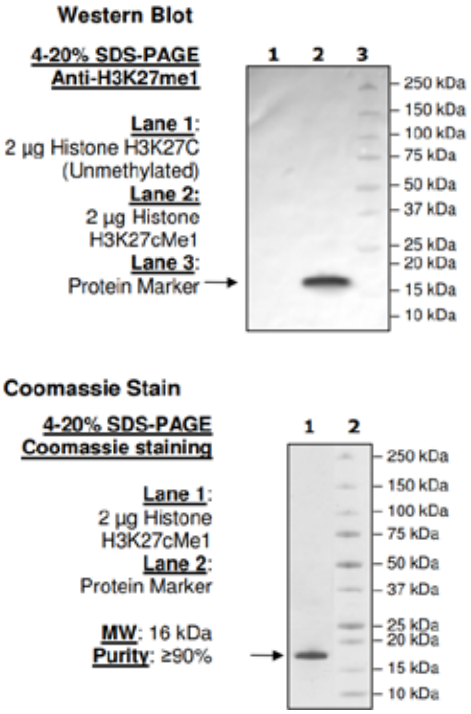
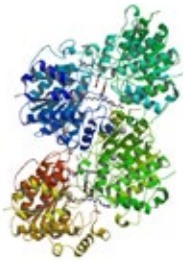


Figure 14. *Histone H3 K27cMe1 quality assurance Cat. #AMS.52081*

Deacetylase



Histone deacetylases (HDACs) repress transcription by removing acetyl groups from histones and non-histone proteins and inducing chromatin condensation. HDAC inhibitors (HDIs) are potent inducers of growth arrest, differentiation, and apoptosis, and are used clinically for treatment of depression, epilepsy and schizophrenia. The association of SIRT1 activity with aging, as well as numerous studies linking HDACs to various leukemias and lymphomas make HDIs key targets for drug discovery. AMSBIO offers a complete panel of HDAC and sirtuin reagents, including enzymes, substrates, and assay kits.

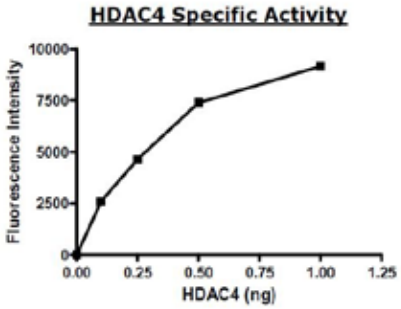


Figure 15. *HDAC4 (Cat. #AMS.50004) activity measured with the Fluorogenic HDAC Class 2a Assay Kit, (Cat. #AMS.50041).*

Substrates

Substrates	Cat. No.	Size
Fluorogenic Deacetylated substrate Standard	AMS.50035	250 nmole
Fluorogenic HDAC class 2a substrate	AMS.50040	250 nmole
Fluorogenic HDAC class 2a substrate 2 (green)	AMS.50042	250 nmole
Fluorogenic HDAC substrate 1	AMS.50032	500 nmole
Fluorogenic HDAC Substrate 2 (Green fluorescence)	AMS.50038	250 nmole
Fluorogenic HDAC substrate 3	AMS.50037	250 nmole
Fluorogenic SIRT substrate 1	AMS.50080	500 nmole
Fluorogenic Sirtuin 5 Substrate	AMS.50126	250 nmole

Deacetylase Assay Kits

The Fluorogenic HDAC Assay Kits are designed to measure HDAC activity using purified HDAC, nuclear or cell extracts, or immunoprecipitates containing HDAC. A unique fluorogenic substrate and developer combination eliminates dealing with the radioactivity, extraction, and chromatography aspects of traditional assays. Instead, these homogenous assays are performed in a single 96-well plate, without time-consuming washes, for rapid and sensitive detection of HDAC activity.

Assay Kits	Cat. No.	Size
HDAC class 2a Fluorogenic Assay Kit	AMS.50041	96 rxns
HDAC Fluorogenic Assay Kit	AMS.50033	96 rxns
HDAC Fluorogenic Assay Kit (Green)	AMS.50034	96 rxns
HDAC1 Fluorogenic Assay Kit	AMS.50061	96 rxns
HDAC1 Kinetic Assay Kit	AMS.53001	96 rxns
HDAC2 Fluorogenic Assay Kit	AMS.50062	96 rxns
HDAC2 Kinetic Assay Kit	AMS.53002	96 rxns
HDAC3 Fluorogenic Assay Kit	AMS.50073	96 rxns
HDAC3 Kinetic Assay Kit	AMS.53003	96 rxns
HDAC4 Fluorogenic Assay Kit	AMS.50064	96 rxns
HDAC5 Fluorogenic Assay Kit	AMS.50065	96 rxns
HDAC7 Fluorogenic Assay Kit	AMS.50067	96 rxns
HDAC8 Fluorogenic Assay Kit	AMS.50068	96 rxns
HDAC9 Fluorogenic Assay Kit	AMS.50069	96 rxns
SIRT1 (Sirtuin1) Fluorogenic Assay Kit	AMS.50081	96 rxns
SIRT2 (Sirtuin2) Fluorogenic Assay Kit	AMS.50087	32 rxns
SIRT3 (Sirtuin3) Fluorogenic Assay Kit	AMS.50088	32 rxns
SIRT5 (Sirtuin5) Fluorogenic Assay Kit	AMS.50085	96 rxns
HDAC Assay Buffer	AMS.50031	20 ml
HDAC developer (2X)	AMS.50030	6 ml
HDAC6 Fluorogenic Assay Kit	AMS.50076	96 rxns
Kinetic HDAC Assay Developer	AMS.53029	1 ml
Sirtuin Assay Buffer	AMS.50090	20 ml
Sirtuin Developer (2X)	AMS.50089	6 ml

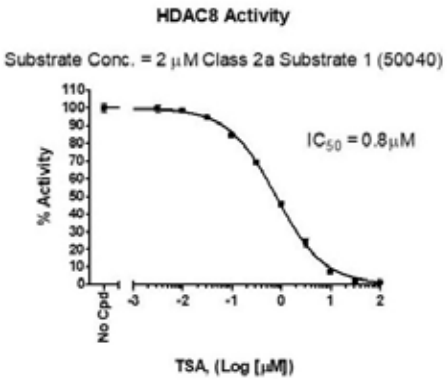


Figure 16. *HDAC8 enzyme activity, measured using the HDAC8 Fluorogenic Assay Kit, Cat. #AMS.50068. Fluorescence was measured using a Bio-Tek fluorescent microplate reader.*

Deacetylase Enzymes

AMSBIO supplies the most extensive line of HDAC enzymes available. These highly active enzymes are suitable for enzymatic profiling, inhibitor screening assays, and drug discovery

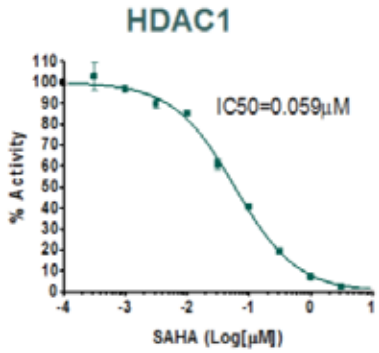


Figure 17. *Determination of the IC50 of SAHA on HDAC1 (Cat. #AMS.50051), measured with the Fluorogenic HDAC Assay Kit (Cat. #AMS.50033).*

Enzymes	Cat. No.	Size
HDAC1, FLAG-tag, His-tag	AMS.50051	50 µg
HDAC1, His-Tag, FLAG-Tag (Mouse)	AMS.50058	50 µg
HDAC10, GST-tag, His-tag	AMS.50010	50 µg
HDAC10, N-FLAG-tag	AMS.50060	50 µg
HDAC11	AMS.50021	10 µg
HDAC11, GST-tag	AMS.50011	50 µg
HDAC2, FLAG-tag	AMS.50052	50 µg
HDAC2, His-tag	AMS.50002	50 µg
HDAC3/NcoR2 Complex, His-tag	AMS.50003	50 µg
HDAC4, GST-tag, His-tag	AMS.50004	10 µg
HDAC5 (full length), GST-tag	AMS.50045	5 µg
HDAC5, Catalytic Domain, His-tag	AMS.50005	10 µg
HDAC6 (H216A), GST-tag	AMS.50046	50 µg
HDAC6 (H611A), GST-tag	AMS.50066	50 µg
HDAC6, FLAG-tag	AMS.50056	50 µg
HDAC6, GST-tag	AMS.50006	50 µg
HDAC6, GST-Tag (Mouse)	AMS.50057	50 µg
HDAC7, GST-tag	AMS.50007	10 µg
HDAC8, His-tag	AMS.50008	50 µg
HDAC9, His-tag	AMS.50009	10 µg
NcoR2 (SMRT), GST-tag	AMS.50020	50 µg
pf-HDAC1, Malaria, His-tag, FLAG-tag	AMS.50063	20 µg
Sirtuin 1 (193-741), GST-tag	AMS.50012	100 µg
Sirtuin 2, His-tag	AMS.50013	100 µg
Sirtuin 3, GST-tag	AMS.50014	100 µg
Sirtuin 4, GST-tag	AMS.50015	100 µg
Sirtuin 5, GST-tag	AMS.50016	100 µg
Sirtuin 6, GST-tag	AMS.50017	100 µg
Sirtuin 7, FLAG-tag	AMS.50018	100 µg

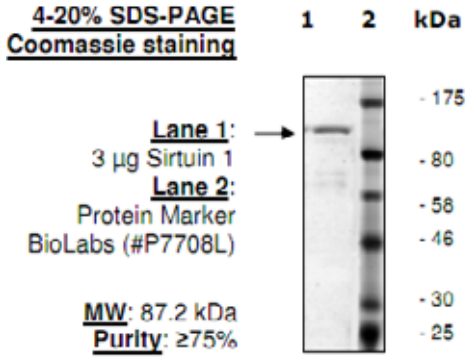


Figure 18. *Purity of Sirt1 enzyme (Cat. #AMS.50012).*

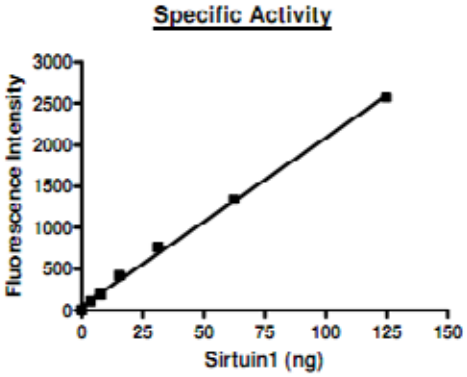


Figure 19. *Activity of Sirt1 enzyme (Cat. #AMS.50012).*

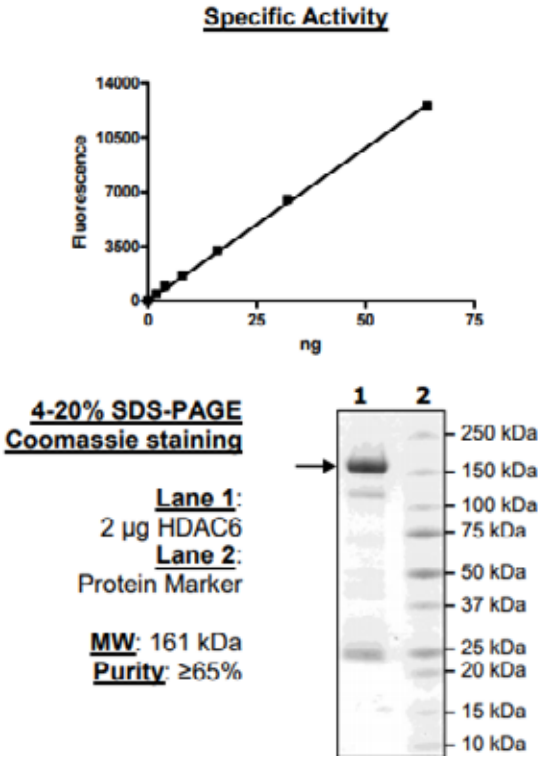


Figure 20. *HDAC6 Cat. #AMS.50006*

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
(S)-HDAC-42	AMS.27208	1 mg
4-iodo-SAHA	AMS.27205	50 mg
AGK2	AMS.27228	5 mg
Apicidin	AMS.27329	10 mg
AR-42 (OSU-HDAC42)	AMS.27603-1	5 mg
AR-42 (OSU-HDAC42)	AMS.27603-2	10 mg
AR-42 (OSU-HDAC42)	AMS.27603-3	50 mg
Belinostat (PXD101)	AMS.27608-2	50 mg
Belinostat (PXD101)	AMS.27608-3	100 mg
Belinostat (PXD101)	AMS.27608-1	10 mg
CBHA	AMS.27204	5 mg
Chidamide	AMS.27202	1 mg
CI-994	AMS.27021	50 mg
CUDC-101	AMS.27022	5 mg
CUDC-907	AMS.27616-3	50 mg
CUDC-907	AMS.27616-1	5 mg
CUDC-907	AMS.27616-2	10 mg
Droxinostat	AMS.27620-1	10 mg
Droxinostat	AMS.27620-2	25 mg
EX527	AMS.27103	1 mg
HC Toxin	AMS.27209	500 µg
HNHA	AMS.27206	10 mg
ITF 2357	AMS.27327	10 mg
JNJ-26481585	AMS.27632-2	10 mg
JNJ-26481585	AMS.27632-3	50 mg
JNJ-26481585	AMS.27632-1	5 mg
Kaempferol	AMS.27757	20 mg
LAQ824 (NVP-LAQ824,Dacinostat)	AMS.27760-1	10 mg
LAQ824 (NVP-LAQ824,Dacinostat)	AMS.27760-2	50 mg
M344	AMS.27203	5 mg
MC1568	AMS.27761-1	10 mg
MC1568	AMS.27761-2	25 mg
Mocetinostat	AMS.27019	10 mg
MS-275 (Entinostat)	AMS.27011	25 mg
Oxamflatin	AMS.27326	10 mg
Oxamflatin	AMS.27201	1 mg
Panobinostat	AMS.27020	5 mg
Parthenolide	AMS.27768-1	250 mg
Parthenolide	AMS.27768-2	50 mg
PCI 34051	AMS.27316	50 mg
PCI-24781 (CRA-024781)	AMS.27769-1	10 mg
PCI-24781 (CRA-024781)	AMS.27769-2	50 mg
PCI-24781 (CRA-024781)	AMS.27769-3	5 mg
Pracinostat (SB939)	AMS.27771-2	5 mg
Pracinostat (SB939)	AMS.27771-3	50 mg
Pracinostat (SB939)	AMS.27771-1	10 mg
Pyroxamide	AMS.27328	50 mg

Inhibitors / Activators continued

Inhibitors/Activators	Cat. No.	Size
Resminostat (RAS2410)	AMS.27773-1	10 mg
Resminostat (RAS2410)	AMS.27773-2	50 mg
Resveratrol	AMS.27642-3	500 mg
Resveratrol	AMS.27642-1	100 mg
Resveratrol	AMS.27642-2	200 mg
RGFP966	AMS.27643-1	5 mg
RGFP966	AMS.27643-2	25 mg
RGFP966	AMS.27643-3	100 mg
Rocilinostat (ACY-1215)	AMS.27644-1	5 mg
Rocilinostat (ACY-1215)	AMS.27644-2	10 mg
Rocilinostat (ACY-1215)	AMS.27644-3	50 mg
Romidepsin (FK228, depsipeptide)	AMS.27646-2	5 mg
Romidepsin (FK228, depsipeptide)	AMS.27646-1	1 mg
SAHA (Vorinostat)	AMS.27006	100 mg
Salermide	AMS.27324	50 mg
SB 939	AMS.27331	25 mg
Scriptaid	AMS.27200	1 mg
SIRT1/2 Inhibitor IV	AMS.27323	25 mg
Sirtinol	AMS.27652-1	5 mg
Sirtinol	AMS.27652-2	25 mg
Sodium Phenylbutyrate	AMS.27654	50 mg
Splitomicin	AMS.27330	25 mg
SRT1720	AMS.27655-1	5 mg
SRT1720	AMS.27655-2	10 mg
SRT1720	AMS.27655-3	50 mg
Suberohydroxamic Acid (SBHA)	AMS.27210	100 mg
Tenovin-1	AMS.27660-2	50 mg
Tenovin-1	AMS.27660-3	100 mg
Tenovin-1	AMS.27660-1	25 mg
Tenovin-6	AMS.27661-3	10 mg
Tenovin-6	AMS.27661-1	1 mg
Tenovin-6	AMS.27661-2	5 mg
Trichostatin A (TSA)	AMS.27102	5 mg
Tubacin	AMS.27662	1 mg
Tubastatin A	AMS.27663-3	100 mg
Tubastatin A	AMS.27663-1	10 mg
Tubastatin A	AMS.27663-2	50 mg
Tubastatin A hydrochloride	AMS.27108	10 mg
Valproic Acid	AMS.27207	10 g

HISTONE ACETYLTRANSFERASES

Acetyltransferases are enzymes that transfer an acetyl group from acetyl CoA to lysine amino acids. In the case of histone acetyltransferases (HATs), these lysine residues reside on histone tails. Generally, addition of acetyl groups to histone tails results in gene activation by inducing a euchromatin conformation and recruiting bromodomain-containing transcription factors for genes in close proximity to the acetylated histone. In a reaction mediated by deacetylase enzymes, such as histone deacetylases (HDACs) and sirtuins, the modification can be removed, thereby allowing for controlled, dynamic regulation of gene expression.

This control over HAT activity is disrupted in disease instances, such as cancer, where abnormal histone acetylation profiles have been shown to correlate with disease progression. Current work is being done to identify the specific epigenetic regulators that contribute to these aberrant acetylation profiles and, more importantly, to develop specific inhibitors and activators of these enzymes.

Assay Kits

Assay Kits	Cat. No.	Size
GCN5 Chemiluminescent Assay Kit	AMS.50079	96 rxns
GCN5 Fluorogenic Assay Kit	AMS.50091	96 rxns
P300 (KAT3B) Fluorogenic Assay Kit	AMS.50092	96 rxns
P300 Chemiluminescent Assay Kit	AMS.50077	96 rxns
P300 Homogeneous Assay Kit	AMS.50078	384 rxns
10x HAT Assay Buffer	AMS.50095	20 ml
HAT Stop Solution	AMS.50096	20 ml

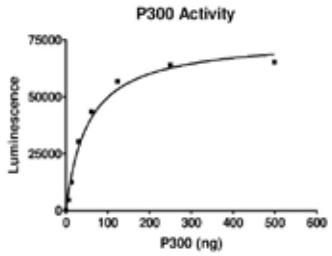


Figure 21. *P300 enzyme activity, measured using the Chemiluminescent P300 Assay Kit (Cat. #AMS.50077).*

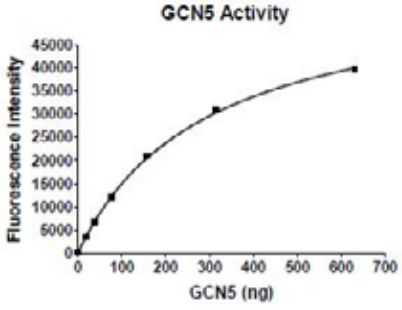


Figure 22. *GCN5 enzyme activity, measured using the Fluorogenic GCN5 Assay Kit (Cat. #AMS.50091).*

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
AICAR	AMS.27049	25 mg
C646	AMS.27613-2	50 mg
C646	AMS.27613-1	10 mg

Enzymes

Enzymes	Cat. No.	Size
ATAT1, GST-tag	AMS.50072	50 µg
GCN5 (KAT2A), FLAG-tag	AMS.50074	50 µg
p300 (KAT3B), His-GST-tags	AMS.50071	50 µg

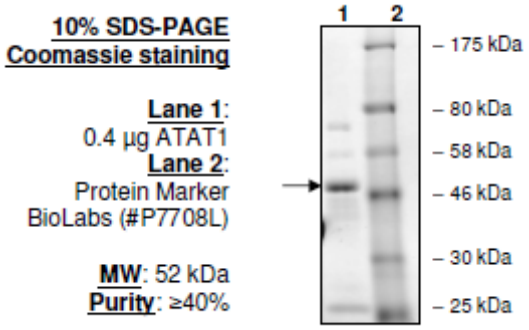


Figure 23. *ATAT1 quality assurance Cat. #AMS.50072*

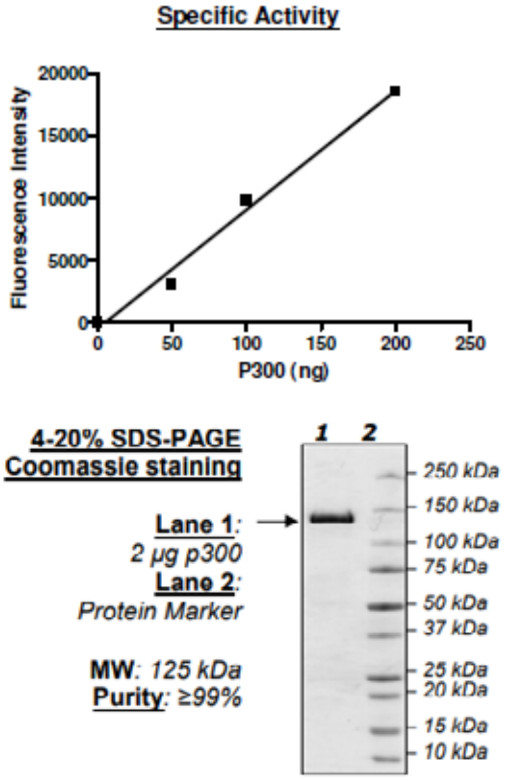
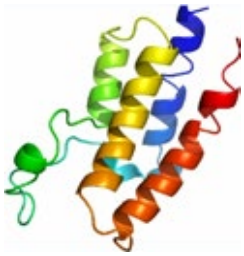


Figure 24. *p300 quality assurance Cat. #AMS.50071*

BROMODOMAINS



Bromodomains (BRDs) are protein domains which recognize acetylated lysines. Bromodomains are emerging as a new class of targets, alongside HATs and HDACs, which will be important in cancer drug discovery as well as treatments of inflammatory diseases such as cardiovascular disease and rheumatoid arthritis. There are over 50 proteins containing one or more BRDs. BRDs have been identified in HATs, methyltransferases (e.g. MLL), chromatin-remodeling complexes, and transcriptional coactivators. AMSBIO provides an ever-growing portfolio of BRDs and kits suitable for bromodomain profiling, inhibitor screening assays, and drug discovery.

Assay Kits

Assay Kits	Cat. No.	Size
ATAD2A Inhibitor Screening Assay Kit	AMS.32601	384 rxns
ATAD2A TR-FRET Assay Kit	AMS.32618	384 rxns
ATAD2B Inhibitor Screening Assay Kit	AMS.32605	384 rxns
ATAD2B TR-FRET Assay Kit	AMS.32620	384 rxns
BAZ2B Inhibitor Screening Assay Kit	AMS.32600	384 rxns
BPTF/FALZ TR-FRET Assay Kit	AMS.32632	384 rxns
BRD1 Inhibitor Screening Assay Kit	AMS.32521	384 rxns
BRD1 TR-FRET Assay Kit	AMS.32625	384 rxns
BRD2 (BD1+BD2) TR-FRET Assay Kit	AMS.32614	384 rxns
BRD2 (BD2) Inhibitor Screening Assay Kit	AMS.32522	384 rxns
BRD3 (BD1) Inhibitor Screening Assay Kit	AMS.32513	384 rxns
BRD3 (BD1+BD2) TR-FRET Assay Kit	AMS.32615	384 rxns
BRD3 (BD2) Inhibitor Screening Assay Kit	AMS.32523	384 rxns
BRD4 (BD1) Inhibitor Screening Assay Kit	AMS.32514	384 rxns
BRD4 (BD1) TR-FRET Assay Kit	AMS.32613	384 rxns
BRD4 (BD1+BD2) TR-FRET Assay Kit	AMS.32612	384 rxns
BRD4 (BD2) Inhibitor Screening Assay Kit	AMS.32524	384 rxns
BRD4 (BD2) TR-FRET Assay Kit	AMS.32617	384 rxns
BRD9 (BD1) Inhibitor Screening Assay Kit	AMS.32519	384 rxns
BRD9 TR-FRET Assay Kit	AMS.32621	384 rxns
BRDT (BD1+BD2) TR-FRET Assay Kit	AMS.32616	384 rxns
BRPF3 Inhibitor Screening Assay Kit	AMS.32608	384 rxns
BRPF3 TR-FRET Assay Kit	AMS.32626	384 rxns
CECR2 Inhibitor Screening Assay Kit	AMS.32611	384 rxns
CECR2 TR-FRET Assay Kit	AMS.32622	384 rxns
CREBBP Inhibitor Screening Assay Kit	AMS.32607	384 rxns
CREBBP TR-FRET Assay Kit	AMS.32619	384 rxns
SMARCA2 Inhibitor Screening Assay Kit	AMS.32610	384 rxns
SMARCA4/BRG1 Inhibitor Screening Assay Kit	AMS.32609	384 rxns
TAF1 (BD1/BD2) Inhibitor Screening Assay Kit	AMS.32604	384 rxns
TAF1 (BD2) Inhibitor Screening Assay Kit	AMS.32624	384 rxns
TAF1 (BD2) TR-FRET Assay Kit	AMS.32627	384 rxns

Assay Kits continued

Assay Kits	Cat. No.	Size
TAF1L (BD1+BD2) TR-FRET Assay Kit	AMS.32629	384 rxns
TAF1L (BD1/BD2) Inhibitor Screening Assay Kit	AMS.32603	384 rxns
TAF1L (BD2) Inhibitor Screening Assay Kit	AMS.32602	384 rxns
TRIM24 Inhibitor Screening Assay Kit	AMS.32606	384 rxns
WDR9/BRWD1 TR-FRET Assay Kit	AMS.32631	384 rxns
BACE1 FRET Assay Kit	AMS.71656	96 rxns
PD-1:PD-L1 TR-FRET Assay	AMS.72032	96 rxns

Proteins

Proteins	Cat. No.	Size
ASH1L, His-tag	AMS.31147	100 µg
ATAD2A, GST-tag	AMS.31121	100 µg
ATAD2A, His-tag	AMS.31109	100 µg
ATAD2B (KIAA1240), GST-tag	AMS.31125	100 µg
BAZ1A, GST-tag	AMS.31136	100 µg
BAZ1B, GST-tag	AMS.31137	100 µg
BAZ1B, His-tag	AMS.31145	100 µg
BAZ2B, His-tag	AMS.31113	100 µg
BRD1, GST-tag	AMS.31011	100 µg
BRD1, His-tag	AMS.31010	100 µg
BRD2 (BD1), GST-tag	AMS.31021	100 µg
BRD2 (BD1), His-tag	AMS.31022	100 µg
BRD2 (BD1+BD2), GST-tag	AMS.31024	100 µg
BRD2 (BD1+BD2), His-tag	AMS.31025	100 µg
BRD2 (BD2), GST-tag	AMS.31023	100 µg
BRD2 (BD2), His-tag	AMS.31020	100 µg
BRD3 (BD1), GST-tag	AMS.31032	100 µg
BRD3 (BD1), His-tag	AMS.31030	100 µg
BRD3 (BD1+BD2), GST-tag	AMS.31035	100 µg
BRD3 (BD1+BD2), His-tag	AMS.31034	100 µg
BRD3 (BD2), GST-tag	AMS.31033	100 µg
BRD3 (BD2), His-tag	AMS.31031	100 µg
BRD4 (BD1), GST-tag	AMS.31040	100 µg
BRD4 (BD1), His-tag	AMS.31042	100 µg
BRD4 (BD1+BD2)	AMS.31047	100 µg
BRD4 (BD1+BD2), GST-tag	AMS.31044	100 µg
BRD4 (BD1+BD2), His-tag	AMS.31045	100 µg
BRD4 (BD2), GST-tag	AMS.31041	100 µg
BRD4 (BD2), His-tag	AMS.31043	100 µg
BRD9, GST-tag	AMS.31091	100 µg
BRD9, His-tag	AMS.31090	100 µg
BRDT (BD1), GST-tag	AMS.31108	100 µg
BRDT (BD1), His-tag	AMS.31101	100 µg
BRDT (BD1+BD2), GST-tag	AMS.31061	100 µg
BRDT (BD2), GST-tag	AMS.31060	100 µg
BRDT (BD2), His-tag	AMS.31100	100 µg
BRPF1, His-tag	AMS.31112	100 µg

Proteins continued

Proteins	Cat. No.	Size
BRPF3, GST-tag	AMS.31130	100 µg
CECR2, GST-tag	AMS.31138	100 µg
CECR2, His-tag	AMS.31046	100 µg
CREBBP (KAT3A), GST-tag	AMS.31128	100 µg
CREBBP (KAT3A), His-tag	AMS.31119	100 µg
FALZ (BPTF), GST-tag	AMS.31134	100 µg
FALZ (BPTF), His-tag	AMS.31131	100 µg
GCN5 (727-837), His-tag	AMS.31114	100 µg
P300 (1046-1163), His-tag	AMS.31118	100 µg
PB1 (BD4), His-tag	AMS.31122	100 µg
PB1 (BD6), His-tag	AMS.31133	100 µg
PCAF (KAT2B), His-tag	AMS.31120	100 µg
PHIP (BD1), GST-tag	AMS.31142	100 µg
PHIP (BD1), His-tag	AMS.31140	100 µg
SMARCA2, GST-tag	AMS.31141	100 µg
SMARCA2, His-tag	AMS.31111	100 µg
SMARCA2, His-Tag, Biotin-Labeled	AMS.31129	50 µg
SMARCA4 (BRG1), GST-tag	AMS.31132	100 µg
SMARCA4 (BRG1), His-tag	AMS.31102	100 µg
TAF1 (BD1), His-tag	AMS.31123	100 µg
TAF1 (BD1+BD2), GST-tag	AMS.31124	100 µg
TAF1 (BD2), GST-tag	AMS.31126	100 µg
TAF1 (BD2), His-tag	AMS.31110	100 µg
TAF1L (BD1), GST-tag	AMS.31105	100 µg
TAF1L (BD1), His-tag	AMS.31103	100 µg
TAF1L (BD1+BD2), GST-tag	AMS.31107	100 µg
TAF1L (BD2), GST-tag	AMS.31106	100 µg
TAF1L (BD2), His-tag	AMS.31104	100 µg
TRIM24 (TIF1), GST-tag	AMS.31127	100 µg
TRIM24 (TIF1), His-tag	AMS.31116	100 µg
TRIM28, GST-tag	AMS.31139	100 µg
TRIM28, His-tag	AMS.31146	100 µg
WDR9/BRWD1 (BD2), GST-tag	AMS.31135	100 µg
WDR9/BRWD1 (BD2), His-tag	AMS.31115	100 µg
ZMYND11, GST-tag	AMS.31144	100 µg
ZMYND8, GST-tag	AMS.31143	100 µg

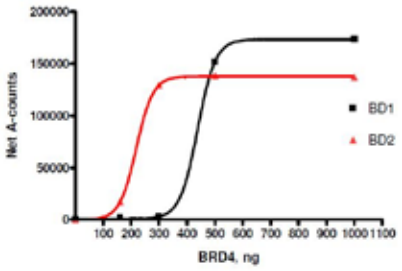


Figure 25. *BRD4 binding activity of BRD4 (49-170), BD1 (Cat. #AMS.31040) and BRD4 (342-460), BD2 (Cat. #AMS.31041) measured using the BRD4 Inhibitor Screening Assay Kit (Cat. #AMS.32504).*

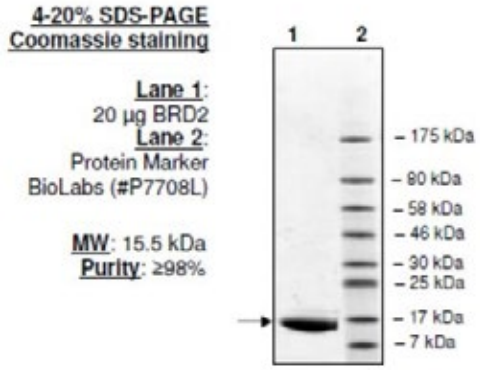


Figure 26. *Purity of BRD2, 65 – 187 (Cat. #AMS.31022).*

Ligands

Ligands	Cat. No.	Size
BET Bromodomain Ligand	AMS.33000	0.5 ml @ 20 µM
Bromodomain Ligand 2	AMS.33003	0.5 ml @ 20 µM
Bromodomain Ligand 3	AMS.33008	0.5 ml @ 20 µM
Bromodomain Ligand 4	AMS.33010	0.5 ml @ 20 µM
Bromodomain Non-Acetylated Ligand 1	AMS.33005	0.5 ml @ 20 µM
Bromodomain Non-Acetylated Ligand 2	AMS.33004	0.5 ml @ 20 µM
Bromodomain Non-Acetylated Ligand 3	AMS.33009	0.5 ml @ 20 µM
Bromodomain Non-Acetylated Ligand 4	AMS.33011	0.5 ml @ 20 µM

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
(+)-JQ1	AMS.27402	5 mg
(+)-JQ1	AMS.27401	1 mg
(+)-JQ1	AMS.27400	10 mg
(-)-JQ1	AMS.27335	25 mg
(-)-JQ1	AMS.27334	5 mg
Bromosporine	AMS.27612	1 mg
CHS-828	AMS.27333	25 mg
I-BET-762	AMS.27630-1	5 mg
I-BET-762	AMS.27630-2	10 mg
I-BET151 (GSK1210151A)	AMS.27629-1	5 mg
I-BET151 (GSK1210151A)	AMS.27629-2	10 mg
I-BET151 (GSK1210151A)	AMS.27629-3	50 mg
I-CBP112 (Hydrochloride)	AMS.27336	1 mg
OTX-015	AMS.27636-3	25 mg
OTX-015	AMS.27636-1	5 mg
OTX-015	AMS.27636-2	10 mg
PFI-1	AMS.27332	25 mg
RediSolution™ (+)-JQ1	AMS.27403	1 mg
RVX-208	AMS.27111	5 mg
SGC-CBP30	AMS.27650-1	10 mg
SGC-CBP30	AMS.27650-2	50 mg

METHYL-LYSINE READER(S)

Histone post-translational modifications regulate chromatin structure and function largely through interactions with effector proteins that often contain multiple histone-binding domains. Methyl lysine readers are a family of proteins, which bind differently methylated lysine and arginine residues. They include Tudor domains, MBT domains, PHD domains, Chromo domains, PWWP and WD.

Assay Kits

Assay Kits	Cat. No.	Size
CBX1 Inhibitor Screening Assay Kit	AMS.79052	384 rxns
L3MBTL1 Inhibitor Screening Assay Kit	AMS.55100	384 rxns
L3MBTL1 TR-FRET Assay Kit	AMS.55200	384 rxns

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
UNC1215	AMS.27405	5 mg
UNC1215	AMS.27406	10 mg
UNC1215	AMS.27404	1 mg
UNC669	AMS.27664-1	10 mg
UNC669	27664-2	25 mg

Proteins

Proteins	Cat. No.	Size
CBX1, GST-tag	AMS.55009	100 µg
CBX2, GST-tag	AMS.55011	100 µg
CBX2, His-tag	AMS.55012	100 µg
CBX7, GST-tag	AMS.55017	100 µg
CDY1, GST-tag	AMS.55007	100 µg
CDY1, His-tag	AMS.55015	100 µg
CHD2, GST-tag	AMS.55005	100 µg
L3MBTL1, GST-tag	AMS.55000	100 µg
L3MBTL1, His-tag	AMS.55002	100 µg
L3MBTL2, His-tag	AMS.55018	100 µg
L3MBTL3, GST-tag	AMS.55013	100 µg
L3MBTL3, His-tag	AMS.55014	100 µg
UHRF1 (108-286), GST-tag	AMS.55003	100 µg
UHRF1 (108-286), His-tag	AMS.55004	100 µg
UHRF1, His-FLAG-tags	AMS.55001	50 µg

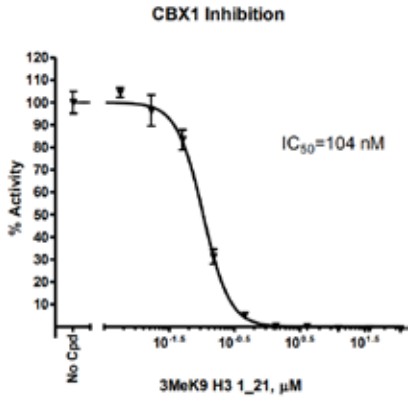


Figure 27. *Inhibition of CBX1 binding, measured using the CBX1 Inhibitor Screening Assay Kit, Cat. #AMS.79052*

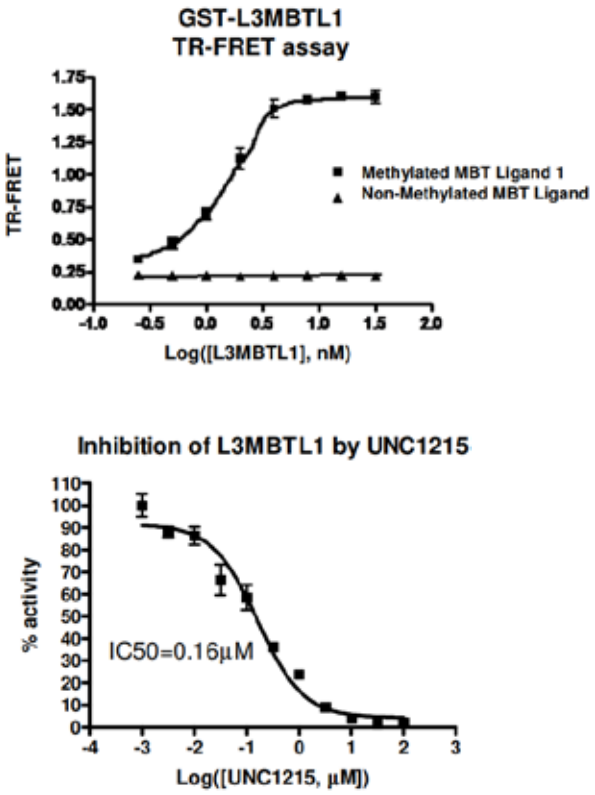


Figure 28. *Interaction of L3MBTL1 (Cat. #AMS.55000) with peptide ligands, assayed using the L3MBTL1 TR-FRET Assay Kit (Cat. #AMS.55200)*

PARP

Poly (ADP-Ribose) Polymerase (PARP) is a nuclear zinc finger protein that catalyzes the NAD-dependent addition of poly (ADP-ribose) to histones, relaxing the chromatin structure to permit transcription. PARP also directly interacts with DNMT1 to modify CpG methylation states. In addition to chromatin remodeling, PARP is involved in a number of cellular processes involving DNA repair and programmed cell death. PARP is activated by caspase cleavage, resulting in apoptosis, and can also stimulate caspase-independent apoptosis via mitochondrial pathways.

Enzymes

AMSBIO provides an extensive line of full-length human PARP isozymes suitable for enzymatic profiling and inhibitor screening assays. Enzyme activity is validated on every lot to ensure successful assays.

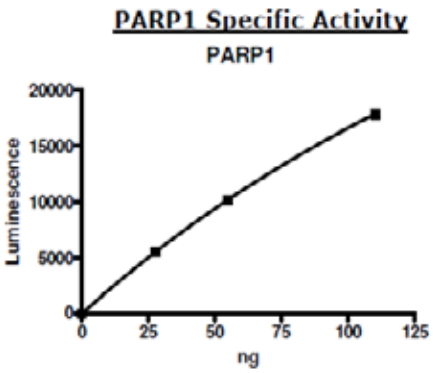


Figure 29. *Activity of PARP1 (Cat. #AMS.80501).*

Enzymes	Cat. No.	Size
PARP1, FLAG-Avi-tag	AMS.80521	20 µg
PARP1, GST-tag	AMS.80501	20 µg
PARP10, FLAG-Strep-Tag	AMS.80522	10 µg
PARP10, His-GST-tags	AMS.80510	10 µg
PARP11, GST-tag	AMS.80511	10 µg
PARP12, GST-tag	AMS.80513	10 µg
PARP14, GST-tag	AMS.80514	10 µg
PARP15, GST-tag	AMS.80517	10 µg
PARP2, GST-tag	AMS.80502	10 µg
PARP3, GST-tag	AMS.80503	10 µg
PARP6, GST-tag	AMS.80506	10 µg
PARP7 (TIPARP), GST-tag	AMS.80507	10 µg
PARP9, GST-tag, His-tag	AMS.80509	10 µg
Tankyrase 1 (PARP5A), GST-tag	AMS.80504	10 µg
Tankyrase 2 (PARP5B) [849-1166], His-GST-tags	AMS.80515	10 µg
Tankyrase 2 (PARP5B), GST-tag	AMS.80505	10 µg

Assay Kits

The PARP and Tankyrase (TNKS) Chemiluminescent Activity Assay kits are designed to measure PARP activity using purified PARP or cell extracts containing PARP. These convenient 96-well assays are perfect for studying enzyme kinetics and for high throughput screening of small molecular inhibitors for drug discovery.

Assay Kits	Cat. No.	Size
PARP1 Chemiluminescent Assay Kit	AMS.80551	96 rxns
PARP1 Chemiluminescent Assay Kit (384-well)	AMS.80569	384 rxns
PARP10 Chemiluminescent Assay Kit	AMS.80560	96 rxns
PARP11 Chemiluminescent Assay Kit	AMS.80561	96 rxns
PARP14 Chemiluminescent Assay Kit	AMS.80568	32 rxns
PARP15 Chemiluminescent Assay Kit	AMS.80567	96 rxns
PARP2 Chemiluminescent Assay Kit	AMS.80552	96 rxns
PARP2 Homogeneous Assay Kit	AMS.80702	384 rxns
PARP3 Chemiluminescent Assay Kit	AMS.80553	96 rxns
PARP6 Chemiluminescent Assay Kit	AMS.80556	32 rxns
TNKS1 Histone Ribosylation Assay Kit (Antibody Detection)	AMS.80574	96 rxns
TNKS1 Histone Ribosylation Assay Kit (Antibody Detection)	AMS.80575	384 rxns
TNKS1 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80573	96 rxns
TNKS1 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80579	384 rxns
TNKS2 Histone Ribosylation Assay Kit (Antibody Detection)	AMS.80577	384 rxns
TNKS2 Histone Ribosylation Assay Kit (Antibody Detection)	AMS.80576	96 rxns
TNKS2 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80578	96 rxns
TNKS2 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80572	384 rxns
10x PARP Assay Buffer	AMS.80602	1 ml
10x PARP Assay Mixture	AMS.80601	300 µl
PARP1 Colorimetric Assay Kit	AMS.80580	96 rxns
PARP2 Colorimetric Assay Kit	AMS.80581	96 rxns
PARP7 (TIPARP) Chemiluminescent Assay Kit	AMS.80557	96 rxns
PARPtrap™ Assay Kit	AMS.80584	96 rxns
TNKS1 Histone Ribosylation Colorimetric Assay Kit	AMS.80582	96 rxns
TNKS2 Histone Ribosylation Colorometric Assay Kit	AMS.80583	96 rxns

Inhibitors / Activators

AMSBIO offers a PARP inhibitor for screening small molecule activity.

Inhibitors/Activators	Cat. No.	Size
1,5-Isoquinolinediol	AMS.27310	25 mg
A-966492	AMS.27601-3	50 mg
A-966492	AMS.27601-1	5 mg
A-966492	AMS.27601-2	10 mg
ABT-888 (Veliparib)	AMS.27101	5 mg
AG-14361	AMS.27602-1	5 mg
AG-14361	AMS.27602-2	10 mg
AG-14361	AMS.27602-3	50 mg
AZD2281 (Olaparib)	AMS.27003	10 mg
AZD2461	AMS.27606-1	5 mg
AZD2461	AMS.27606-2	10 mg
BMN 673	AMS.27609-1	10 mg
BMN 673	AMS.27609-2	50 mg
BMN-673 8R,9S	AMS.27610-1	10 mg
BMN-673 8R,9S	AMS.27610-2	50 mg
DPQ	AMS.27311	1 mg
Iniparib	AMS.27016	10 mg
INO-1001	AMS.27631-3	50 mg
INO-1001	AMS.27631-1	5 mg
INO-1001	AMS.27631-2	10 mg
JW 55	AMS.27633-1	10 mg
JW 55	AMS.27633-2	50 mg
ME0328	AMS.27634-2	50 mg
ME0328	AMS.27634-1	10 mg
NU 7026	AMS.27312	50 mg
PJ34	AMS.27041	1 mg
Rucaparib (AG-014699,PF-01367338)	AMS.27647-1	5 mg
Rucaparib (AG-014699,PF-01367338)	AMS.27647-2	10 mg
Rucaparib (AG-014699,PF-01367338)	AMS.27647-3	50 mg
Tankyrase Inhibitors (TNKS) 22	AMS.27658	100 mg
Tankyrase Inhibitors (TNKS) 49	AMS.27659	100 mg
UPF 1069	AMS.27665-1	10 mg
UPF 1069	AMS.27665-2	50 mg
XAV939	AMS.27100	10 mg

Substrates

Substrates	Cat. No.	Size
Activated DNA (5x)	AMS.80605	500 µL
Histone H1, Full Length, His-tag	AMS.52042	1 mg
Histone H1, Full Length, His-tag	AMS.52043	100 µg
Histone H2a, Full Length, His-tag	AMS.52025	100 µg
Histone H2a, Full Length, His-tag	AMS.52021	1 mg
Histone H2b, Full Length, His-tag	AMS.52026	100 µg
Histone H2b, Full Length, His-tag	AMS.52022	1 mg
Histone H3, Full Length, His-tag	AMS.52027	100 µg
Histone H3, Full Length, His-tag	AMS.52023	1 mg
Histone H4, Full Length, His-tag	AMS.52024	1 mg
Histone H4, Full Length, His-tag	AMS.52028	100 µg
Histone Mixture (5X), His-tag	AMS.52029	1 ml
NAD+, Biotin-Labeled	AMS.80610	500 µl

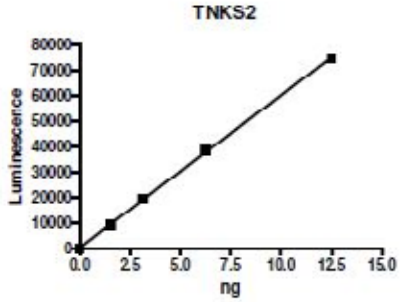


Figure 30. *Enzyme activity of TNKS2 (Cat. #AMS.80515).*

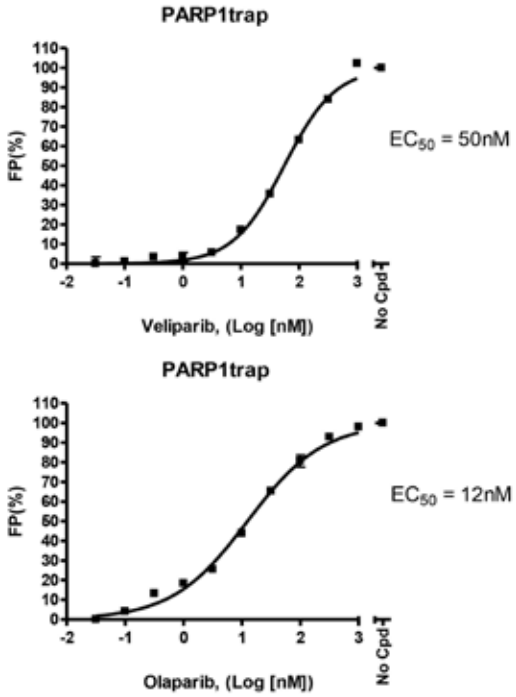
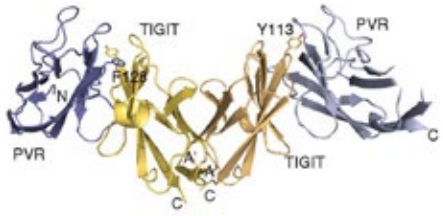


Figure 31. *PARP1/DNA trapping measured in the presence of increasing concentrations of Olaparib (AZD2281) (left) or Veliparib (ABT-888) (right) using the PARPtrap™ Assay Kit, Cat. #AMS.80584.*

Immune system plays a role in virtually all human diseases and immunotherapy has become an important approach for the treatment of numerous diseases. Immunotherapy is defined as the treatment of disease by inducing, enhancing, or suppressing an immune response. This often involves targeting immunoreceptors with small molecule inhibitors/ activators or immune system components, including antibodies or antibody fragments (Fab). Immunotherapies have shown efficacy in the treatment of cancer, autoimmune diseases and inflammatory diseases.



Antibodies

Antibodies	Cat. No.	Size
Anti-PD-1 Neutralizing Antibody, PE-labeled	71290-1	50 µg
Anti-CD20 Antibody	71209	100 µg
Anti-CD3 Antibody	71274-1	50 µg
Anti-CD3 Antibody	71274-2	100 µg
Anti-CTLA4 Neutralizing Antibody	71212	100 µg
Anti-GITR Antibody, PE-labeled	71295-2	100 µg
Anti-GITR Antibody, PE-labeled	71295-1	50 µg
Anti-IL-17A Neutralizing Antibody	91015	100 µg
Anti-LAG3 Antibody, PE-Labeled	71226-1	50 µg
Anti-LAG3 Antibody, PE-Labeled	71226-2	100 µg
Anti-LAG3, Neutralizing Antibody	71219	100 µg
Anti-OX40 Antagonist Antibody	72063-1	50 µg
Anti-OX40 Antagonist Antibody	72063-2	100 µg
Anti-OX40 Antibody, PE-Labeled	72064-1	50 µg
Anti-OX40 Antibody, PE-Labeled	72064-2	100 µg
Anti-OX40 Competitive Antibody	72558-1	50 µg
Anti-PD-1 (S228P) Antibody	71326	100 µg
Anti-PD-1 Neutralizing Antibody	71120	100 µg
Anti-PD-1 Neutralizing Antibody, Biotin-labeled	71215	100 µg
Anti-PD-1 Neutralizing Antibody, PE-labeled	71290-2	100 ug
Anti-PD-L1 (CD274) Neutralizing Antibody	71213	100 µg
Anti-PD-L1 Antibody, PE-labeled	71128-1	50 µg
Anti-PD-L1 Antibody, PE-labeled	71128-2	100 µg
Anti-PD-L1 Neutralizing Antibody, Biotin-labeled	71214	100 µg
Anti-TIGIT Antibody, PE-Labeled	71228-2	100 µg
Anti-TIGIT Antibody, PE-Labeled	71228-1	50 µg
Anti-TIGIT Inhibitor Antibody	71218	100 µg
Anti-TIGIT Neutralizing Antibody	71340	100 µg
Anti-TIM-3 Antibody, PE-Labeled	71121-2	100 µg
Anti-TIM-3 Antibody, PE-Labeled	71121-1	50 µg

Assay Kits

Assay Kits	Cat. No.	Size
ARG1 Inhibitor Screening Assay Kit	72048	384 rxns
BTLA:HVEM[Biotinylated] Inhibitor Screening Assay Kit	72008	96 rxns
CD137[Biotinylated]:CD137L Inhibitor Screening Assay Kit	72025	96 rxns
CD226:CD112 Homogeneous Assay Kit	72051	384 rxns
CD226:CD155 Homogeneous Assay Kit	72052	384 rxns
CD28:B7-1[Biotinylated] Inhibitor Screening Assay Kit	72007	96 rxns
CD28:B7-2[Biotinylated] Inhibitor Screening Assay Kit	72062	96 rxns
CD38 Inhibitor Screening Assay Kit (Cyclase Activity)	71275	96 rxns
CD47:SIRP-α[Biotinylated] Inhibitor Screening Assay Kit	72044	96 rxns
CD47:SIRP-γ[Biotinylated] Inhibitor Screening Assay Kit	72059	96 rxns
CD73 Inhibitor Screening Assay Kit	72058	384 rxns
CD73 Inhibitor Screening Assay Kit	72055	96 rxns
CTLA4:B7-1 TR-FRET Assay Kit	72120	384 rxns
CTLA4:B7-1[Biotinylated] Inhibitor Screening Assay Kit	72009	96 rxns
CTLA4[Biotinylated]:B7-2 Inhibitor Screening Assay Kit	72024	96 rxns
GITRL:GITR[Biotinylated] Inhibitor Screening Assay Kit	72061	96 rxns
IDO1 Fluorogenic Inhibitor Screening Assay Kit	72037	96 rxns
IDO1 Fluorogenic Inhibitor Screening Assay Kit (384)	72047	384 rxns
IDO1 Inhibitor Mechanism of Action Assay Kit	72050	50 rxns
IDO1 Inhibitor Screening Assay Kit	72021	96 rxns
IDO1 Inhibitor Screening Assay Kit (384)	72034	384 rxns
IDO2 Inhibitor Screening Assay Kit	72022	96 rxns
IL-17RA[Biotin]:IL-17A Inhibitor Screening Assay Kit	72060	96 rxns
KEAP1-Nrf2 Inhibitor Screening Assay Kit	72020	96 rxns
MAT2A Inhibitor Screening Assay Kit	71402	384 rxns
Mouse IDO1 Inhibitor Screening Assay Kit	72041	96 rxns
Mouse IDO2 Inhibitor Screening Assay Kit	72042	96 rxns
Mouse PD-1[Biotinylated]:PD-L1 Inhibitor Screening Assay Kit	72027	96 rxns
NAMPT Inhibitor Screening Assay Kit	71276	96 rxns
OX40[Biotinylated]:OX40L Inhibitor Screening Assay Kit	72045	96 rxns
PD-1:PD-L1 Homogeneous Assay Kit	72014	384 rxns
PD-1:PD-L1[Biotinylated] Inhibitor Screening Assay Kit	72003	96 rxns
PD-1:PD-L1[Biotinylated] Inhibitor Screening Colorimetric Assay Kit	72016	96 rxns
PD-1:PD-L2 Homogeneous Assay Kit	72015	384 rxns
PD-1:PD-L2 TR-FRET Assay Kit	72012	384 rxns
PD-1:PD-L2[Biotinylated] Inhibitor Screening Assay Kit	72004	96 rxns

Assay Kits continued

Assay Kits	Cat. No.	Size
PD-1:PD-L2[Biotinylated] Inhibitor Screening Colorimetric Assay Kit	72017	96 rxns
PD-1[Biotinylated]:PD-L1 Homogeneous Assay Kit	72028	384 rxns
PD-1[Biotinylated]:PD-L1 Inhibitor Screening Assay Kit	72005	96 rxns
PD-1[Biotinylated]:PD-L1 Inhibitor Screening Colorimetric Assay Kit	72018	96 rxns
PD-1[Biotinylated]:PD-L2 Inhibitor Screening Assay Kit	72006	96 rxns
PD-1[Biotinylated]:PD-L2 Inhibitor Screening Colorimetric Assay Kit	72019	96 rxns
PD-L1:B7-1[Biotinylated] Inhibitor Screening Assay Kit	72026	96 rxns
TDO Fluorogenic Inhibitor Screening Assay Kit (384) (Human)	72049	384 wells
TDO Fluorogenic Inhibitor Screening Assay Kit (Human)	72039	96 rxns
TDO Inhibitor Screening Assay Kit	72023	96 rxns
TDO Inhibitor Screening Assay Kit (384)	72036	384 rxns
TIGIT:CD112 Homogeneous Assay Kit	72030	384 rxns
TIGIT:CD155 Homogeneous Assay Kit	72029	384 rxns
TPH1 Inhibitor Screening Assay Kit	72056	384 rxns

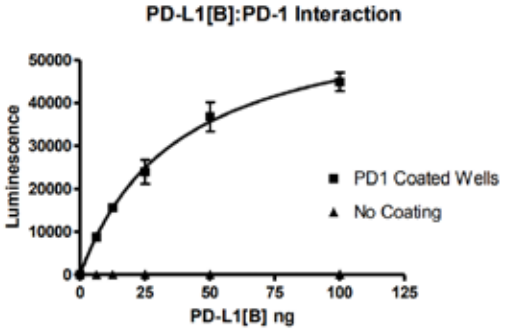


Figure 32. *PD-1-PD-L1 binding activity, measured using the using the PD-1:PD-L1[Biotinylated] Inhibitor Screening Assay Kit, (Cat. #AMS.72003)*

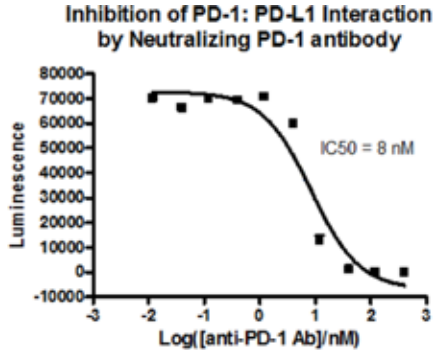


Figure 33. *Inhibition of PD-1-PD-L1 binding by PD-1 Neutralizing Antibody (Cat. #AMS.71120). Luminescence was measured using a Bio-Tek fluorescent microplate reader.*

Protein

Protein	Cat. No.	Size
ARG1, His-Tag	71658	50 µg
ARG2, His-Tag	71659	50 µg
B7-1 (CD80), Fc fusion (Human) HiP™	71125	100 µg
B7-1 (CD80), Fc fusion, Biotin-labeled (Human) HiP™	71114	50 µg
B7-1 (CD80), FLAG-Avi-His-Tag	71261	100 µg
B7-1 (CD80), FLAG-Avi-His-Tag (Mouse)	79002	100 µg
B7-2 (CD86), Fc fusion (Human)	71150	100 µg
B7-2 (CD86), Fc fusion, Biotin labeled (Human) HiP™	71159	50 µg
B7-H2 (CD275, ICOSL), Fc fusion (Human) HiP™	71130	100 µg
B7-H4, His-tag (Human)	71144	100 µg
B7-H4, His-tag, Biotin-labeled (Human) HiP™	71129	50 µg
B7-H5 (VISTA), Fc fusion (Human) HiP™	71148	100 µg
B7-H5 Fc fusion, Avi-Tag, Biotin-labeled (Human)	71327	50 µg
BTLA(CD272), Fc fusion (Human)	71141	100 µg
c-Mer, GST-tag (Human)	40254	10 µg
CBL-B (Y363F), His-tag, Biotin-labeled (Human)	80413	50 µg
CBL-B, His-tag, Biotin-labeled (Human)	80412	50 µg
CD112, Fc-Fusion, Avi-Tag, Biotin-labeled (Human)	72231	50 µg
CD112, His-tag (Human) HiP™	71197	100 µg
CD112, His-tag, Biotin-labeled (Human) HiP™	71234	50 µg
CD137 (4-1BB), Fc fusion (Human) HiP™	71170	100 µg
CD137 (4-1BB), Fc Fusion, Biotin-labeled (Human) HiP™	71171	50 µg
CD137, Fc fusion (hIgG1) (Mouse)	71250	100 µg
CD137, Fc fusion (mIgG2a), Avi-tag (Mouse) HiP™	71254	100 µg
CD137, Fc fusion (mIgG2a), Biotin-labeled (Mouse) HiP™	71255	50 µg
CD137L (4-1BB ligand), His-tag	71189	100 µg
CD150, Fc Fusion (IgG1), Biotin Labeled (Human)	72307	50 µg
CD150, Fc Fusion, Avi-Tag (Human)	72304	100 µg
CD155 (PVR), His-tag (Human)	71181	100 µg
CD155 (PVR), His-tag (Mouse) HiP™	71167	100 µg
CD155, His-tag, Biotin-labeled (Mouse) HiP™	71168	50 µg
CD160, His-tag (Human) HiP™	71173	100 µg
CD160, His-tag, Biotin-labeled (Human) HiP™	71135	50 µg
CD2, Fc fusion, Avi-Tag, (Human) HiP™	71264	100 µg
CD2, Fc fusion, Biotin-labeled (Human) HiP™	71270	50 µg
CD226, Fc fusion (Human) HiP™	71252	100 µg
CD226, Fc fusion, Biotin-labeled (Human) HiP™	71253	50 µg
CD244, Fc Fusion (IgG1), Avi-Tag (Human)	72305	100 µg
CD244, Fc Fusion (IgG1), Biotin-Labeled (Human)	72306	50 µg
CD27, Fc fusion (Human)	71176	100 µg
CD28, Fc fusion (Human)	71113	200 µg
CD28H, Fc fusion, Biotin-labeled (Human) HiP™	71239	50 µg
CD38, His-Tag (Human), HiP™	71277	100 µg

Protein continued

Protein	Cat. No.	Size
CD38-APC, His-Tag	AMS.71883	100 µg
CD39, His-Tag (Human)	AMS.71284	50 µg
CD40, Fc fusion (Human)	AMS.71174	100 µg
CD40L (CD154), His-tag (Human)	AMS.71191	100 µg
CD44, Fc fusion (Human)	AMS.71187	100 µg
CD44, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71133	50 µg
CD46-BC, His-tag (Human)	AMS.71230	100 µg
CD46-BC, His-tag (Monkey)	AMS.71232	100 µg
CD46-C, His-tag (Human)	AMS.71231	100 µg
CD46-C, His-tag (Monkey)	AMS.71233	100 µg
CD47, Fc fusion (Human) HiP™	AMS.71177	100 µg
CD47, Fc fusion, Avi-Tag (Human) HiP™	AMS.79051	100 µg
CD47, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71169	50 µg
CD47, Fc-Fusion, Streptavidin-Labeled (Human) HiP™	AMS.71292	100 µg
CD47, His-tag (Human)	AMS.71127	100 µg
CD48, Fc fusion (IgG1), Avi-Tag™ HiP™ (Human)	AMS.72309	100 µg
CD48, Fc Fusion (IgG1), Biotin-Labeled (Human) HiP™	AMS.72308	50 µg
CD70, His-tag (Human)	AMS.71178	100 µg
CD73 His-tag (Human) HiP™	AMS.71184	50 µg
CD96, Fc-Fusion, Avi-Tag (Human)	AMS.71265	100 µg
CD96, Fc-Fusion, Avi-Tag, Biotin Labeled (Human)	AMS.71280	50 µg
CEACAM, Avi-His-Tag	AMS.70206	100 µg
CEACAM, Avi-His-Tag, Biotin Labeled	AMS.70201	50 µg
CTLA4 (CD152), Fc fusion (Human)	AMS.71149	100 µg
CTLA4 (CD152), Fc fusion, Biotin-labeled (Human)	AMS.71152	50 µg
DRAK2	AMS.71225	100 µg
DRAK2, GST-Tag (Human)	AMS.71224	100 µg
FcRn (FCGRT/B2M), His-Tag, Biotin-Labeled, (Human) HiP™	AMS.71283	50 µg
GITR (CD357), Fc fusion (Human) HiP™	AMS.71172	100 µg
GITR (CD357), Fc Fusion, Biotin-labeled (Human)	AMS.71256	50 ug
GITRL, His-tag (Human)	AMS.71190	100 µg
GPC3, His-tag [Monkey (M. fascicularis)]	AMS.71260	100 ug
HPK1, Active, GST-tag (Human)	AMS.40398	10 µg
HVEM, Fc fusion (Human)	AMS.71142	100 µg
HVEM, Fc fusion, Biotin-labeled (Human)	AMS.71143	50 µg
ICOS (CD278), Fc fusion (Human)	AMS.71179	100 µg
IDO1, His-tag (Human)	AMS.71182	50 µg
IDO1, His-tag (Mouse)	AMS.71196	50 µg
IDO2, His-tag (Human)	AMS.71194-2	100 µg
IDO2, His-tag (Mouse)	AMS.71240	200 µg
IgG1, Fc (Human) HiP™	AMS.71456	200 µg
IgG4, Fc (Human) HiP™	AMS.71457	200 µg
IL-17A (Human)	AMS.91014-1	5 µg
IL-17A (Human)	AMS.91014-2	25 µg

Protein	Cat. No.	Size
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-1	5 µg
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-2	25 µg
KEAP1, His-tag	AMS.70040	100 µg
KIR2DL3, Fc fusion, Biotin-labeled (Human)	AMS.71298	50 µg
LAG3 (CD223) (Mouse), Fc(Human) Avi-Tag, Biotin HiP™	AMS.79003	50 µg
LAG3 (CD223), Biotin-labeled (Human) HiP™	AMS.71147	50 µg
LAG3 (CD223), Fc fusion (Human)	AMS.71146	100 µg
LAG3, His-Tag, HiP™	AMS.71229	100 µg
LAT, His-tag (Human)	AMS.71188	20 µg
LATS1, GST-Tag	AMS.79041	10 µg
LATS2, GST-Tag	AMS.79042	10 µg
LIGHT, His-Tag (Human)	AMS.71266	100 µg
mTOR/Raptor/mLST8 Complex, FLAG-tag, His-tag (Human) HiP™	AMS.40300	10 µg
NALP3 (K232A), His-FLAG-Tag	AMS.40741	100 µg
OX40 (CD134), Biotin-labeled, His-tag (Human) HiP™	AMS.71310	50 µg
OX40 (CD134), Fc fusion (Human)	AMS.71175	100 µg
OX40L (CD252), His-tag (Human)	AMS.71185	100 µg
PD-1 (CD279), Fc fusion (Human)	AMS.71106	100 µg
PD-1 (CD279), Fc fusion (Mouse) HiP™	AMS.71116	100 µg
PD-1 (CD279), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71109	50 µg
PD-1 (CD279), Fc fusion, Biotin-labeled (Mouse) HiP™	AMS.71118	50 µg
PD-1 (CD279), FLAG-tag (Human) HiP™	AMS.71115	50 µg
PD-1 (E136A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71247	50 µg
PD-1 (Human), Fc Fusion (Mouse IgG2a) HiP™	AMS.71997	100 µg
PD-1 (I126A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71238	50 µg
PD-1 (I134A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71245	50 µg
PD-1 (K78A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71244	50 µg
PD-1 (L128A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71248	50 µg
PD-1 (Monkey), Fc fusion (Human IgG1) HiP™	AMS.71158	100 µg
PD-1 (Monkey), Fc fusion (Human IgG1), Biotin-labeled HiP™	AMS.71235	50 µg
PD-1 (Mouse), Fc fusion (Human), PE-labeled	AMS.71267	50 µg
PD-1 (P130A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71246	50 µg
PD-1, Fc Fusion, PE-labeled (Human)	AMS.71243	50 µg
PD-1, FLAG-Avi-His-tag (Human) HiP™	AMS.71198	50 µg
PD-1, FLAG-His-tag, Biotin-labeled (Human) HiP™	AMS.71325	50 µg
PD-L1 (A121Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71320	50 µg
PD-L1 (CD274), Fc fusion (Human) HiP™	AMS.71104-1	50 µg

Protein continued

Protein	Cat. No.	Size
PD-L1 (CD274), Fc fusion (Human) HiP™	AMS.71104-2	100 µg
PD-L1 (CD274), Fc fusion (Mouse) HiP™	AMS.71117-1	50 µg
PD-L1 (CD274), Fc fusion (Mouse) HiP™	AMS.71117-2	100 µg
PD-L1 (CD274), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71105	50 µg
PD-L1 (CD274), Fc fusion, Biotin-labeled (Mouse) HiP™	AMS.71119	50 µg
PD-L1 (CD274), FLAG-tag (Human) HiP™	AMS.71183	50 µg
PD-L1 (D122A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71321	50 µg
PD-L1 (D26A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71313	50 µg
PD-L1 (F19A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71311	50 µg
PD-L1 (Human), Fc fusion (Mouse IgG2a) HiP™	AMS.71999	100 µg
PD-L1 (Human), Fc Fusion (Mouse IgG2a) PE-Labeled	AMS.71998	50 µg
PD-L1 (I54A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71314	50 µg
PD-L1 (K124A), Fc fusion, Avi-Tag (Human) HiP™	AMS.71993	100 µg
PD-L1 (K124A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71323	50 µg
PD-L1 (M115A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71318	50 µg
PD-L1 (Monkey), Fc fusion (Human IgG1) HiP™	AMS.71153	100 µg
PD-L1 (Monkey), Fc fusion (Human IgG1), Biotin-labeledHiP™	AMS.71154	50 µg
PD-L1 (Q66A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71316	50 µg
PD-L1 (R113A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71317	50 µg
PD-L1 (R125A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71324	50 µg
PD-L1 (S117Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71319	50 µg
PD-L1 (T20Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71312	50 µg
PD-L1 (Y123A), Fc fusion, Avi-Tag (Human)	AMS.71992	100 µg
PD-L1 (Y123A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71322	50 µg
PD-L1 (Y56A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71315	50 µg
PD-L1(CD274), FLAG-Avi-His-Tag, (Human) HiP™	AMS.71279	100 µg
PD-L1, Fc Fusion (Human IgG1) PE-Labeled	AMS.71881	50 µg
PD-L1, Fc fusion, PE-labeled (Mouse)	AMS.71268	50 µg
PD-L2 (CD273), Fc fusion (Human) HiP™	AMS.71107	100 µg
PD-L2 (CD273), Fc fusion, Biotin-labeled (Human)	AMS.71108	50 µg
RANK, Fc fusion (IgG1), Avi-tag (Human)	AMS.70823	100 µg
RANK, Fc fusion (IgG1), Biotin Labeled (Human)	AMS.70822	50 µg
Sestrin 1, FLAG-tag	AMS.50284	50 µg
Sestrin 2, FLAG-tag	AMS.50286	50 µg

Protein	Cat. No.	Size
SIRP-ɣ (CD172g), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71236	50 µg
SIRP-α (CD172a), His-tag (Human)	AMS.71145	100 µg
SIRP-α (SIRP alpha), His-tag, Biotin-labeled (Human) HiP™	AMS.71138	50 µg
TDO, His-tag (Human)	AMS.71195	50 µg
TDO2, His-tag (Mouse)	AMS.71241	50 µg
TIGIT, Fc fusion (Human)	AMS.71186	100 µg
TIGIT, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71251	50 µg
TIM-3, Avi-His-Tag	AMS.71262	100 µg
TIM-3, Biotin-labeled, His-tag (Human) HiP™	AMS.71237	50 µg
TIM-3, Fc fusion (Human)	AMS.71151	100 µg
TIM-3, FLAG-tag (Human)	AMS.71180	100 µg
TPH1, His-tag (Human)	AMS.71192	50 µg
TPH2, His-tag (Human)	AMS.71193	50 µg
TUT4, FLAG-tag (Human)	AMS.71259	50 µg
TUT4, FLAG-tag, Biotin-Labeled (Human)	AMS.71258	25 µg

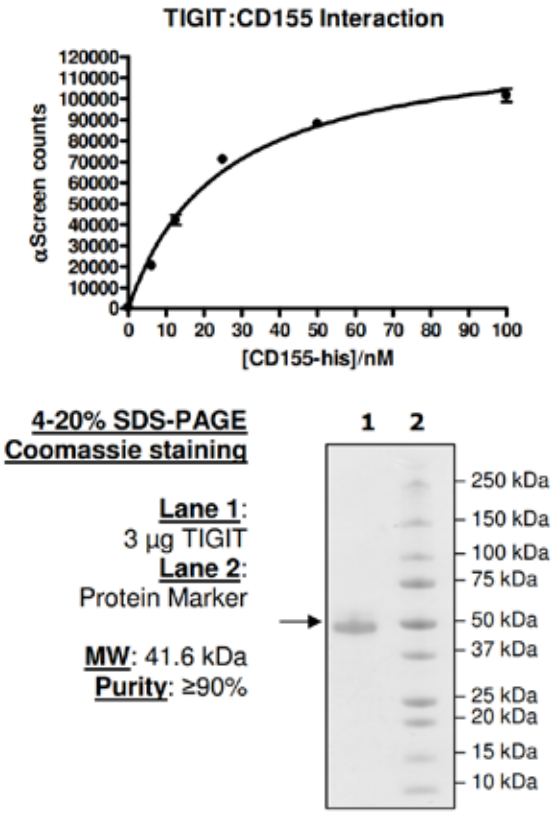


Figure 34. *TIGIT, Fc fusion, Biotin-labeled quality assurance Cat. #AMS.71251*

Assay Kit Components

Assay Kit Components	Cat. No.	Size
3x CLTA4 Assay Buffer	AMS.33297	100 ml
5X CD73 Assay Buffer	AMS.74000	10 ml
IDO1 Assay Buffer	AMS.73002	1 ml
IDO1 Fluorescence Solution	AMS.73299	2 ml
IDO1 Fluorogenic Reaction Solution	AMS.73009	10 ml
IDO1 Reaction Solution	AMS.73001	10 ml
IDO2 Assay Buffer	AMS.73004	1 ml
IDO2 Reaction Solution	AMS.73003	10 ml
PD-1 Cell Growth Medium	AMS.60190	500 ml
PD-1 Cell-Based Assay Medium	AMS.60189	100 ml
TDO Assay Buffer	AMS.73006	1 ml
TDO Fluorogenic Reaction Solution	AMS.73010	10 ml
TDO Primer Mix-qPCR Assay	AMS.71271	96 rxns
TDO Reaction Solution	AMS.73005	10 ml
Thaw Medium 1	AMS.60187	100 ml
Thaw Medium 2	AMS.60184	100 ml
Thaw Medium 3	AMS.60186	100 ml
Thaw Medium 4	AMS.60181	100 ml
Thaw Medium 5	AMS.60182	100 ml
Thaw Medium 6	AMS.60183	100 ml
Thaw Medium 7	AMS.60185	100 ml

Cell Based Assay / Stable Lines

Cell Based Assay/Stable Lines	Cat. No.	Size
ADCC Bioassay Effector Cell F variant (Low Affinity) - Jurkat Recombinant Cell Line	AMS.60540	2 vials
ADCC Bioassay Effector Cell V variant (High Affinity) - Jurkat Recombinant Cell Line	AMS.60541	2 vials
ADCP Bioassay Effector Cell FcγRIIa (H variant) /NFAT Reporter-Jurkat	AMS.71273	2 vials
CD137L (4-1BBL) / TCR Activator- CHO-K1 Recombinant Cell Line	AMS.60527	2 vials
CD137L (4-1BBL) CHO-K1 Recombinant Cell Line	AMS.60523	2 vials
CD155 (PVR) - HEK293 Recombinant Cell Line	AMS.60537	2 vials
CD155 / TCR Activator - CHO Recombinant Cell line	AMS.60548	2 vials
CD27 CHO-K1 Stable Recombiant Cell Line	AMS.60624	2 vials
CD40/NF-κB Reporter (Luc) - HEK293 Recombinant Stable Cell Line	AMS.60626	2 vials
CD47 - HEK293 Cell Line	AMS.71249	2 vials
CD47 CHO-K1 Cell line	AMS.60602	2 vials
Foxp3 Reporter (Luc) - Jurkat Recombinant Cell Line	AMS.60628	2 vials
GITR / NF-κB-Luciferase Reporter (Luc) - Jurkat Cell Line	AMS.60546	2 vials

Cell Based Assay/Stable Lines	Cat. No.	Size
GITRL CHO-K1 Recombinant Cell Line	AMS.60547	2 vials
HEK293 - T-REx Recombinant Cell Line	AMS.71227	2 vials
IDO1 Cell-Based Assay Kit	AMS.72031	100 rxns
IDO1 Cellular Activity QuickDetect™ Supplements	AMS.62000-1	100 rxns
IDO1 Cellular Activity QuickDetect™ Supplements	AMS.62000-2	1000 rxns
IDO1-HEK293 Recombinant Cell line (Human)	AMS. 60532	2 vials
IDO2 - HEK293 Recombinant Cell Line (Human)	AMS.60533	2 vials
IDO2 Cellular Activity QuickDetect™ Supplements	AMS.62001-1	100 rxns
IDO2 Cellular Activity QuickDetect™ Supplements	AMS.62001-2	1000 rxns
IL-2-Luciferase Reporter (Luc) - Jurkat Cell Line	AMS.60481	2 vials
LAG3 / NFAT Reporter - Jurkat Recombinant Cell Line	AMS.71278	2 vials
NET – CHOK1 Recombinant Cell Line	AMS.60557	2 vials
NF-κB-Luciferase Reporter (Luc) - Jurkat Recombinant Cell Line	AMS.60651	2 vials
NF-κB Reporter (Luc) - A549 Recombinant Stable Cell Line	AMS.60625	2 vials
NFAT Reporter (Luc) – Jurkat Recombinant Cell Line	AMS.60621	2 vials
Normal Human Peripheral Blood Mononuclear Cells, Frozen	AMS.79059	30 million cells
OX40 - HEK293 Recombinant Cell Line	AMS.60682	2 vials
OX40 / NF-κB Reporter – HEK293 Recombinant Cell Line	AMS.60482	2 vials
PD-1 - HEK293 Recombinant Cell Line	AMS.60680	2 vials
PD-1 / NFAT Reporter - Jurkat Recombinant Cell Line	AMS.60535	2 vials
PD-1:PD-L1/PD-L2 Cell-Based Inhibitor Screening Assay Kit	AMS.60800	100 rxns
PD-L1 - CHO Recombinant Cell Line	AMS.60543	2 vials

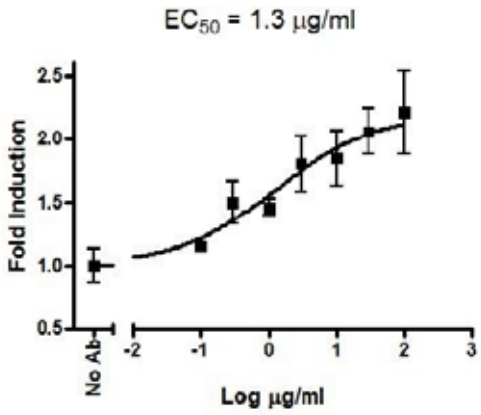
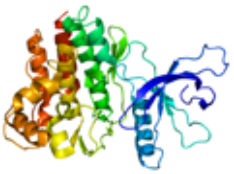


Figure 35. *Characterization of biological activity of anti-LAG3 neutralizing antibody in LAG3 cell-based assay using the LAG3/NFAT Reporter-Jurkat cells co-cultured with Raji cells. Cat. #AMS.71278*

Tyrosine kinases are comprised of two groups, receptor tyrosine kinases, and non-receptor (cytoplasmic) tyrosine kinases. Over the past 20 years, studies of tyrosine kinases have produced numerous insights into the structure, regulation, and function of these enzymes.



Receptor Tyrosine Kinase

Receptor tyrosine kinases are the high affinity cell surface receptors for growth factors, cytokines and hormones. Receptor tyrosine kinases are key regulators of normal cellular processes and also play critical roles in the development and progression of many types of cancer.

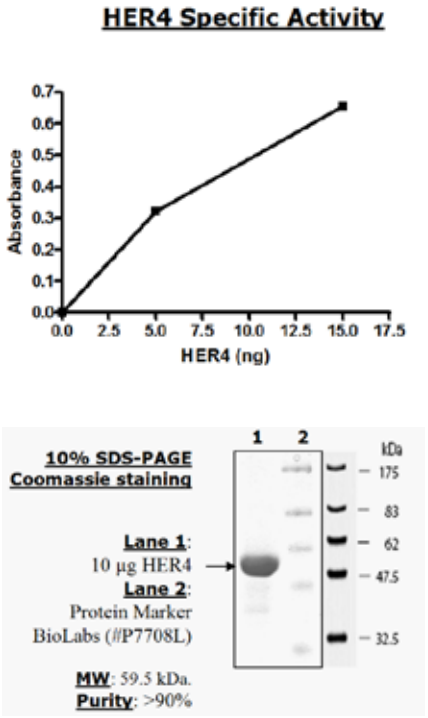


Figure 36. *Activity and purity of HER4, ERBB4, (Cat. #AMS.40232).*

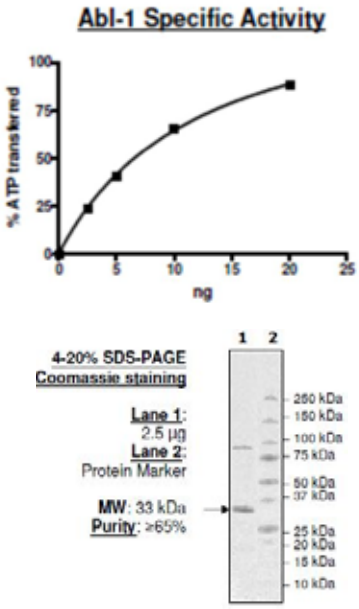


Figure 37. *Activity and purity of Abl-1 (Cat. #AMS.40411).*

Receptor Tyrosine	Cat. No.	Size
Abl Kinase Mutant (T334I), His-tag	AMS.40415	10 µg
Abl Kinase, His-tag	AMS.40411	10 µg
ALK , GST-tag	AMS.40214	10 µg
Axl, GST-tag	AMS.40180	10 µg
c-Mer, GST-tag (Human)	AMS.40254	10 µg
cKit (D816V), His-tag	AMS.40252	10 µg
cKit (V560G), His-tag	AMS.40253	10 µg
cKit (V654A), His-tag	AMS.40251	10 µg
cKit, His-tag	AMS.40250	10 µg
cMet, GST-tag	AMS.40255	10 µg
DDR1, GST-tag	AMS.40184	10 µg
DDR2, GST-tag	AMS.40185	10 µg
EGFR (L858R), GST-tag	AMS.40189	10 µg
EGFR (T790M), GST-tag	AMS.40188	10 µg
EGFR (T790M, C797S, L858R), GST-tag	AMS.40351	10 µg
EGFR (T790M, L858R), GST-tag	AMS.40350	10 µg
EGFR, GST-tag	AMS.40187	10 µg
EPHA1, GST-tag	AMS.40191	10 µg
EPHA2, His-tag	AMS.40190	10 µg
EPHA3, GST-tag	AMS.40192	10 µg
EPHA4, GST-tag	AMS.40193	10 µg
EPHA6, GST-tag	AMS.40194	10 µg
EPHB2, His-tag	AMS.40200	10 µg
EPHB3, GST-tag	AMS.40186	10 µg
EPHB4, His-tag	AMS.40201	10 µg
FGFR1 (V561M), GST-tag	AMS.40209	10 µg
FGFR1(FLT2), GST-tag	AMS.40210	10 µg
FGFR2, GST-tag	AMS.40211	10 µg
FGFR3, GST-tag	AMS.40212	10 µg

Receptor Tyrosine Kinase continued

Receptor Tyrosine	Cat. No.	Size
FGFR4, GST-tag	AMS.40213	10 µg
Flt1, His-tag	AMS.40223	10 µg
Flt3, His-tag	AMS.40225	10 µg
FMS, GST-tag	AMS.40227	10 µg
HER2, GST-tag	AMS.40230	10 µg
HER4, GST-tag	AMS.40232	10 µg
IGF-1R, GST-tag	AMS.40240	10 µg
Insulin receptor (INSR), GST-tag	AMS.40241	10 µg
IRR, GST-tag	AMS.40242	10 µg
Mouse EGFR, FLAG-tag	AMS.40195	10 µg
Mouse EPHB1, GST-tag	AMS.40199	10 µg
MUSK, His-tag	AMS.40079	10 µg
PDGFRa, GST-tag	AMS.40261	10 µg
PDGFRa, Mouse, GST-tag	AMS.40260	10 µg
PDGFRβ, His-tag	AMS.40263	10 µg
Rat MET, GST-tag	AMS.40228	10 µg
Ret, GST-tag	AMS.40267	10 µg
RON, GST-tag	AMS.40292	10 µg
ROR1, GST-tag	AMS.40396	10 µg
ROR2, GST-tag	AMS.40296	10 µg
ROS1, GST-tag	AMS.40268	10 µg
Tie2, GST-tag	AMS.40370	10 µg
Tie2, His-tag	AMS.40270	10 µg
TRKA, GST-tag	AMS.40280	10 µg
TRKB, GST-tag	AMS.40281	10 µg
TRKC, GST-tag	AMS.40282	10 µg
TYRO3, GST-tag	AMS.40293	10 µg
VEGFR2 (KDR), GST-tag	AMS.40301	10 µg
VEGFR3 (Flt4), GST-tag	AMS.40302	10 µg

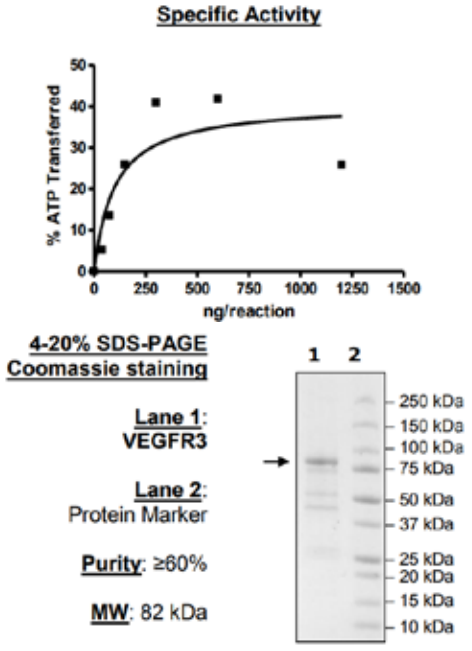


Figure 38. *Activity and purity of VEGF3 (Cat. #AMS.40302).*

Cytoplasmic Tyrosine Kinases

Three major classes of non-receptor (cytoplasmic) tyrosine kinases have been identified: Src, Abl and Jak. Many of the non-receptor tyrosine kinases are involved in the mediation of immune and inflammatory responses, and misregulation of these enzymes has been linked to multiple human cancers.

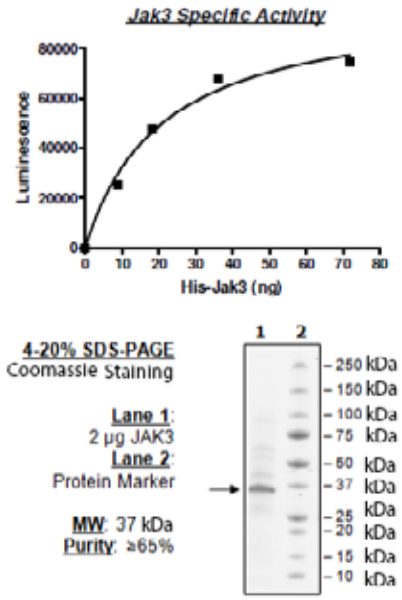


Figure 39. *Activity and purity of JAK3 (Cat. #AMS.40452).*

Cytoplasmic Tyrosine	Cat. No.	Size
ACK1, GST-tag	AMS.40400	10 µg
BLK, GST-tag	AMS.40401	10 µg
BMX, GST-tag	AMS.40402	10 µg
BRK, GST-tag	AMS.40403	10 µg
BTK, GST-tag	AMS.40405	10 µg
CAMK2δ, GST-tag	AMS.41109	10 µg
CSK, GST-tag	AMS.40410	10 µg
FAK, GST-tag	AMS.40420	10 µg
FES, His-FLAG-tag	AMS.40425	10 µg
FGR, GST-tag	AMS.40422	10 µg
FRK, GST-tag	AMS.40424	10 µg
FYN A, FLAG-tag	AMS.40433	10 µg
HCK, GST-tag	AMS.40440	10 µg
ITK, GST-tag	AMS.40445	10 µg
Jak1, GST-tag	AMS.40449	10 µg
Jak2 (JH1 domain), His-tag	AMS.40450	10 µg
Jak2 (JH1, JH2 domain), His-GST-tags	AMS.40451	10 µg
Jak3, His-tag	AMS.40452	10 µg
LCK, GST-tag	AMS.40470	10 µg
LYN A, GST-tag	AMS.40471	10 µg
LYNB, GST-tag	AMS.40472	10 µg
Mouse FER, GST-tag	AMS.40419	10 µg
Mouse ITK, GST-tag	AMS.40446	10 µg
PYK2, His-tag	AMS.40480	10 µg

Cytoplasmic Tyrosine Kinases continued

Cytoplasmic Tyrosine	Cat. No.	Size
Rat ITK, GST-tag	AMS.40447	10 µg
SRC, GST-tag	AMS.40483	10 µg
SRC, His-tag	AMS.40484	10 µg
SYK, Cat.alytic, GST-tag	AMS.40487	10 µg
SYK, Full length, GST-tag	AMS.40485	10 µg
TXK, GST-tag	AMS.40486	10 µg
Tyk2, His-tag	AMS.40285	10 µg
Yes1, GST-tag	AMS.40488	10 µg
ZAP70, GST-tag	AMS. 40490	10 µg

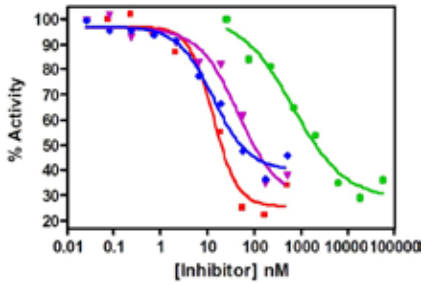


Figure 42. *Inhibition Curve of PI-3 Kinase. Varying amounts of inhibitors (LY294002, green; wortmannin, red; PI-103, blue) were added to PI-3K (30 nM) in the presence of ATP.*

Lipid Kinase

Lipid kinases are one of the most promising new classes of potential drug targets. PI-3 and sphingosine kinases regulate a wide variety of cellular functions, including cell growth, proliferation, differentiation, intracellular trafficking, motility, and survival. As a result, defects in lipid kinase function lead to multiple disease states, including several forms of cancer and diabetes.

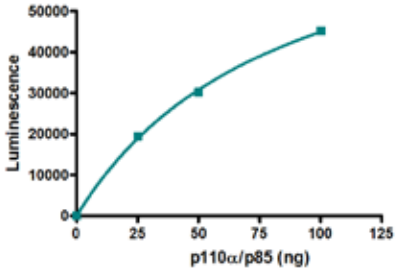


Figure 40. *Activity of PI3 kinase (p110a/p85a), (Cat. #AMS.40620).*

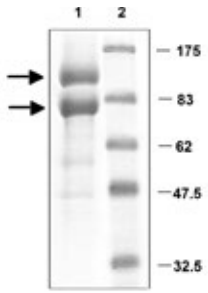


Figure 41. *Coomassie blue-stained gel of PI3 kinase (p110a/p85a), (Cat. #AMS.40620) Purity ≥80%.*

Lipids	Cat. No.	Size
PI3 Kinase [p110α (N345K)/p85α], His-Tag	AMS.40646	10 µg
Ceramide Kinase, FLAG-tag	AMS.40617	10 µg
IP6K2, Biotin-labeled, His-tag, Avi-tag	AMS.40643	10 µg
IP6K2, FLAG-His-tags	AMS.40642	20 µg
Mouse Sphingosine kinase 1a, His-tag	AMS.40613	10 µg
Mouse Sphingosine kinase 2, His-tag	AMS.40614	10 µg
p110α(K111N)/p85α, FLAG-tag	AMS.40639	20 µg
p85α, His-tag	AMS.40630	100 µg
PI3 Kinase (p110α/p55γ), His-Tag	AMS.40645	10 µg
PI3 kinase (p110α/p85α), FLAG-tag	AMS.40620	20 µg
PI3 kinase (p110α/p85α), GST-tag	AMS.40621	20 µg
PI3 kinase (p110β/p85α), FLAG-tag	AMS.40622	20 µg
PI3 kinase (p110γ/PIK3R5) complex, His-tag, GST-tag	AMS.40626	20 µg
PI3 kinase (p110δ/p85α), GST-tag	AMS.40628	20 µg
PI3 kinase (p120γ), His-tag	AMS.40625	20 µg
PI3 Kinase [p110α (E545K)/p85α], His-Tag	AMS.40644	10 µg
PI3 kinase [p110α(E545K)/p85α], FLAG-tag	AMS.40640	20 µg
PI3 kinase [p110α(H1047R)/p85α], FLAG-tag	AMS.40641	20 µg
PIP5K1A, GST-tag	AMS.40305	10 µg
Sphingosine kinase 1, His-tag	AMS.40610	20 µg
Sphingosine kinase 2 (long), His-tag	AMS.40612	10 µg
Sphingosine kinase 2, His-tag	AMS.40611	20 µg
VPS34, FLAG-tag	AMS.40690	20 µg

Serine Threonine Kinase

Serine/threonine protein kinases phosphorylate the hydroxyl group of specific serine or threonine residues. Over 125 different human serine/threonine kinases have been identified. The proteins are involved in the regulation of nearly every cell signaling pathway, including gene expression, growth, proliferation, differentiation, adhesion, motility, and death.

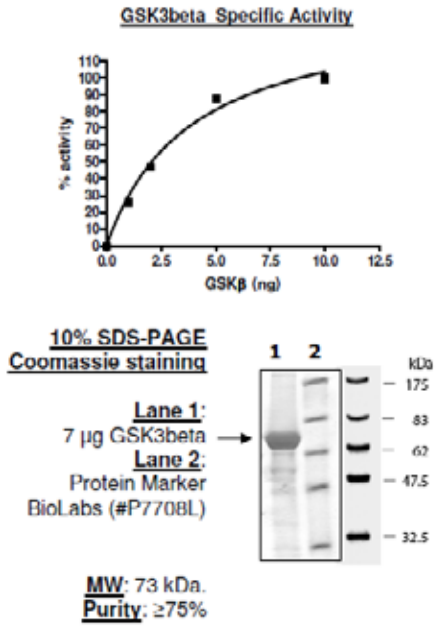


Figure 43. *Activity and purity of GSK3beta (Cat.#AMS.40007).*

Serine Threonine	Cat. No.	Size
ABL2, His-tag	AMS.40417	10 µg
AKT1, Active	AMS.40003	10 µg
AKT2, Active, His-tag	AMS.40011	10 µg
AKT2, Inactive, His-tag	AMS.40001	100 µg
AKT3, His-tag	AMS.40012	10 µg
ALK1, GST-tag	AMS.40018	10 µg
ALK2, GST-tag	AMS.40019	10 µg
ALK4, GST-tag	AMS.40020	10 µg
AMPK (A1/B1/G1), His-tags	AMS.40025	10 µg
AMPK (A1/B1/G2), His-tag	AMS.40701	5 µg
AMPK (A1/B1/G2), His-tags	AMS.40021	10 µg
AMPK (A1/B1/G3), His-tag	AMS.40702	5 µg
AMPK (A1/B1/G3), His-tags	AMS.40022	10 µg
AMPK (A1/B2/G1), His-tag	AMS.40703	5 µg
AMPK (A1/B2/G1), His-tags	AMS.40023	10 µg
AMPK (A2/ B1/G1), His-tag	AMS.40704	5 µg
AMPK (A2/B1/G1), His-tags	AMS.40024	10 µg
AMPK (A2/B2/G1), His-tag	AMS.40705	5 µg
AMPK (A2/B2/G1), His-tags	AMS.40026	10 µg
AMPK (A2/B2/G2), His-tag	AMS.40706	5 µg

Serine Threonine Kinase continued

Serine Threonine	Cat. No.	Size
AMPK (A2/B2/G2), His-tags	AMS.40027	10 µg
aRAF, His-tag	AMS.40010	10 µg
Ask1, GST-tag	AMS.40028	10 µg
AURORA C, GST-tag	AMS.40178	10 µg
Aurora Kinase A	AMS.40004	10 µg
Aurora Kinase B, GST-tag, His-tag	AMS.40002	10 µg
BRAF (V600E), GST-tag	AMS.40533	10 µg
BRAF, GST-tag	AMS.40065	10 µg
BRAF/p50, FLAG-tag	AMS.40005	10 µg
BRSK2, His-tag	AMS.40016	10 µg
CAMK1, Mouse, GST-tag	AMS.40030	10 µg
CAMK1β, Mouse, GST-tag	AMS.40031	10 µg
CAMK1γ, GST-tag	AMS.40032	10 µg
CAMK1γ, GST-tag	AMS.40036	10 µg
CAMK1δ, GST-tag	AMS.40037	10 µg
CAMK2α, GST-tag	AMS.40038	10 µg
CAMK2β, His-tag, GST-tag	AMS.40041	10 µg
CAMK2γ, GST-tag	AMS.40042	10 µg
CAMK2δ, GST-tag	AMS.40043	10 µg
CAMK4, GST-tag	AMS.40029	10 µg
CAMKK1, GST-tag	AMS.40044	10 µg
CAMKK2, GST-tag	AMS.40046	10 µg
Casein Kinase 1α1	AMS.40310	10 µg
CDK1/CyclinA2, GST-tag	AMS.40100	10 µg
CDK1/CyclinB1, GST-tag	AMS.40454	10 µg
CDK2 (no tag)/CyclinA2, His-GST-tags	AMS.41101	10 µg
CDK2/CyclinA2, GST-tag	AMS.40101	10 µg
CDK2/CyclinE1, GST-tag	AMS.40102	10 µg
CDK3/CyclinE1, GST-tag	AMS.40103	10 µg
CDK4(EE,T172A)/Cyclin D1, His-tag	AMS.40094	20 µg
CDK4/CyclinD3, GST-tag	AMS.40104	10 µg
CDK5/p25, GST-tag	AMS.40105	10 µg
CDK5/p35, GST-tag	AMS.40095	10 µg
CDK6/CyclinD1, His-tag, GST-tag	AMS.40097	10 µg
CDK6/CyclinD3, His-tags	AMS.40206	20 µg
CDK7/CyclinH1/MNAT1, His-tags	AMS.40098	10 µg
CDK9/CyclinK, GST-tag	AMS.40106	10 µg
CDK9/CyclinT1, GST-tag	AMS.40307	10 µg
CHK1, GST-tag	AMS.40039	10 µg
CHK2, His-tag	AMS.40040	10 µg
CK2a1, GST-tag	AMS.40045	10 µg
CLK1, GST-tag	AMS.40196	10 µg
CLK2, GST-tag	AMS.40197	10 µg
CLK3, GST-tag	AMS.40198	10 µg
Cot (MAP3K8), GST-His-tags	AMS.40050	10 µg
cRAF (RAF1)	AMS.40008	10 µg
DAPK1, GST-tag	AMS.40051	10 µg
DAPK2, GST-tag	AMS.40049	10 µg

Serine Threonine Kinase continued

Serine Threonine	Cat. No.	Size
DAPK3, GST-tag	AMS.40052	10 µg
DCAMKL1, GST-tag	AMS.40047	10 µg
DCAMKL2, GST-tag	AMS.40048	10 µg
DMPK, GST-tag	AMS.40054	10 µg
DRAK2	AMS.71225	100 µg
DRAK2, GST-Tag (Human)	AMS.71224	100 µg
DYRK2, His-tag	AMS.40053	10 µg
EEF2K, GST-tag	AMS.40057	10 µg
EIF2AK2, GST-tag	AMS.40058	10 µg
EIF2AK3, GST-tag	AMS.40059	10 µg
ERK1	AMS.40055	10 µg
ERK2, GST-tag	AMS.40299	10 µg
ERN1 (IRE1), GST-tag	AMS.40306	10 µg
GCK (MAP4K2), GST-tag	AMS.40107	10 µg
GRK2, GST-tag	AMS.40060	10 µg
GRK5, GST-tag	AMS.40063	10 µg
GRK6, GST-tag	AMS.40066	10 µg
GRK7, GST-tag	AMS.40108	10 µg
GSK3α	AMS.40006	10 µg
GSK3β	AMS.40007	10 µg
HGK (MAP4K4), GST-tag	AMS.40109	10 µg
HIPK1, GST-tag	AMS.40179	10 µg
HIPK3, His-tag	AMS.40110	10 µg
HIPK4, GST-tag	AMS.40111	10 µg
HPK1, Active, GST-tag (Human)	AMS.40398	10 µg
Human IRE1, His-tag	AMS.40709	10 µg
ICK, GST-tag	AMS.40112	10 µg
IKKβ, GST-tag	AMS.40304	10 µg
IRAK1, His-tag	AMS.40202	10 µg
IRAK2, GST-tag	AMS.40087	10 µg
IRAK4, GST-tag	AMS.40064	10 µg
JNK2, GST-tag	AMS.40113	10 µg
KHS1 (GCKR), GST-tag	AMS.40115	10 µg
LATS1, GST-Tag	AMS.79041	10 µg
LATS2, GST-Tag	AMS.79042	10 µg
LKB1/MO25/STRAD Complex, STK11, His-tag, MO25, GSTtag, STRAD	AMS.40069	20 µg
Lok1 (Stk10), His-tag	AMS.40074	10 µg
LRRK2 (D1994A), GST-Tag	AMS.40831	10 µg
LRRK2 (G2019S), GST-Tag	AMS.40832	10 µg
LRRK2 (G2385R), GST-Tag	AMS.40833	10 µg
LRRK2 (I2020T), GST-Tag	AMS.40834	10 µg
LRRK2 (R1441C), GST-Tag	AMS.40835	10 µg
LRRK2 (R1441G), GST-Tag	AMS.40836	10 µg
LRRK2 (R1441H), GST-Tag	AMS.40837	10 µg
LRRK2 (Y1699C), GST-Tag	AMS.40838	10 µg
LRRK2 (Y1699G), GST-Tag	AMS.40839	10 µg
LRRK2, GST-Tag	AMS.40842	10 µg

Serine Threonine	Cat. No.	Size
LRRK2 (Y1699C), GST-Tag	AMS.40838	10 µg
LRRK2 (Y1699G), GST-Tag	AMS.40839	10 µg
LRRK2, GST-Tag	AMS.40842	10 µg
MAP3K14(NIK), GSt-tag	AMS.40090	10 µg
MAPK10 (JNK3), GST-tag	AMS.40092	10 µg
MAPK14 (p38α), His-tag, active	AMS.40243	20 µg
MAPKAPK2, His-tag	AMS.40116	10 µg
MAPKAPK2, Inactive, GST-tag	AMS.40088	100 µg
MAPKAPK3, GST-tag	AMS.40117	10 µg
MAPKAPK5, GST-tag	AMS.40118	10 µg
MARK1, GST-tag	AMS.40119	10 µg
MARK3, GST-tag	AMS.40120	10 µg
MEK1, GST-tag	AMS.40123	10 µg
MEK1, Non-activated, GST-tag	AMS.40531	50 µg
MEK2, GST-tag	AMS.40125	10 µg
MEKK2, GST-tag	AMS.40122	10 µg
MEKK3, GST-tag	AMS.40124	10 µg
MELK, GST-tag	AMS.40708	10 µg
MINK1, GST-tag	AMS.40126	10 µg
MKK6, GST-tag	AMS.40089	20 µg
MLCK, GST-tag	AMS.40127	10 µg
MLK1, GST-tag	AMS.41102	10 µg
MLK2, GST-tag	AMS.41103	10 µg
MLK3, GST-tag	AMS.41104	10 µg
MLK4, GST-tag	AMS.41105	10 µg
MNK1 (T385D), GST-tag	AMS.40078	10 µg
MNK2, GST-tag	AMS.40128	10 µg
Mouse AURORA A, GST-tag	AMS.40177	10 µg
Mouse Cot (MAP3K8), His-GST-tags	AMS.41050	10 µg
Mouse JNK1, GST-tag	AMS.40071	10 µg
Mouse MEK1 (EE), GST-tag	AMS.40121	10 µg
Mouse PAK3, GST-tag	AMS.40147	10 µg
MRCKα, GST-tag	AMS.40129	10 µg
MRCKβ, GST-tag	AMS.40130	10 µg
MSK1, GST-tag	AMS.40131	10 µg
MSSK1 (SRPK3), GST-tag	AMS.40132	10 µg
MST3, GST-tag	AMS.40133	10 µg
MST4, GST-tag	AMS.40134	10 µg
mTOR/Raptor/mLST8 Complex, FLAG-tag, His-tag (Human) HiP™	AMS.40300	10 µg
MYLK2, His-tag	AMS.40135	10 µg
MYLK3, GST-tag	AMS.40136	10 µg
MYO3β, GST-tag	AMS.40137	10 µg
NDR, GST-tag	AMS.40138	10 µg
NEK11, GST-tag	AMS.40139	10 µg
NEK2	AMS.40009	10 µg
NEK3, GST-tag	AMS.40140	10 µg
NEK6, His-tag	AMS.40014	10 µg

Serine Threonine Kinase continued

Serine Threonine	Cat. No.	Size
MAP3K14(NIK), GSt-tag	AMS.40090	10 µg
MAPK10 (JNK3), GST-tag	AMS.40092	10 µg
MAPK14 (p38α), His-tag, active	AMS.40243	20 µg
MAPKAPK2, His-tag	AMS.40116	10 µg
MAPKAPK2, Inactive, GST-tag	AMS.40088	100 µg
MAPKAPK3, GST-tag	AMS.40117	10 µg
MAPKAPK5, GST-tag	AMS.40118	10 µg
MARK1, GST-tag	AMS.40119	10 µg
MARK3, GST-tag	AMS.40120	10 µg
MEK1, GST-tag	AMS.40123	10 µg
MEK1, Non-activated, GST-tag	AMS.40531	50 µg
MEK2, GST-tag	AMS.40125	10 µg
MEKK2, GST-tag	AMS.40122	10 µg
MEKK3, GST-tag	AMS.40124	10 µg
MELK, GST-tag	AMS.40708	10 µg
MINK1, GST-tag	AMS.40126	10 µg
MKK6, GST-tag	AMS.40089	20 µg
MLCK, GST-tag	AMS.40127	10 µg
MLK1, GST-tag	AMS.41102	10 µg
MLK2, GST-tag	AMS.41103	10 µg
MLK3, GST-tag	AMS.41104	10 µg
MLK4, GST-tag	AMS.41105	10 µg
MNK1 (T385D), GST-tag	AMS.40078	10 µg
MNK2, GST-tag	AMS.40128	10 µg
Mouse AURORA A, GST-tag	AMS.40177	10 µg
Mouse Cot (MAP3K8), His-GST-tags	AMS.41050	10 µg
Mouse JNK1, GST-tag	AMS.40071	10 µg
Mouse MEK1 (EE), GST-tag	AMS.40121	10 µg
Mouse PAK3, GST-tag	AMS.40147	10 µg
MRCKα, GST-tag	AMS.40129	10 µg
MRCKβ, GST-tag	AMS.40130	10 µg
MSK1, GST-tag	AMS.40131	10 µg
MSSK1 (SRPK3), GST-tag	AMS.40132	10 µg
MST3, GST-tag	AMS.40133	10 µg
MST4, GST-tag	AMS.40134	10 µg
mTOR/Raptor/mLST8 Complex, FLAG-tag, His-tag (Human) HiP™	AMS.40300	10 µg
MYLK2, His-tag	AMS.40135	10 µg
MYLK3, GST-tag	AMS.40136	10 µg
MYO3β, GST-tag	AMS.40137	10 µg
NDR, GST-tag	AMS.40138	10 µg
NEK11, GST-tag	AMS.40139	10 µg
NEK2	AMS.40009	10 µg
NEK3, GST-tag	AMS.40140	10 µg
NEK6, His-tag	AMS.40014	10 µg
NEK7, GST-tag	AMS.40141	10 µg
NEK9, GST-tag	AMS.40142	10 µg
p38α, GST-tag	AMS.40070	10 µg

Serine Threonine	Cat. No.	Size
p38β, GST-tag	AMS.40143	10 µg
p38γ (p38gamma), GST-tag	AMS.40144	10 µg
p38δ (p38delta), GST-tag	AMS.40145	10 µg
p70S6K (S6K1), GST-tag	AMS.40062	20 µg
p70S6Kb, GST-tag	AMS.40146	10 µg
PAK1	AMS.40072	10 µg
PAK2	AMS.40073	10 µg
PAK4	AMS.40076	10 µg
PAK5, His-tag	AMS.40077	10 µg
PAK6, His-tag	AMS.40081	10 µg
PAK7, GST-tag	AMS.40148	10 µg
PASK, GST-tag	AMS.40149	10 µg
PDK1, GST-tag	AMS.40080	10 µg
PFKFB4, His-tag	AMS.71199	50 µg
PHKG1, GST-tag	AMS.40150	10 µg
PHKG2, GST-tag	AMS.40151	10 µg
PIM1, Active, GST-tag	AMS.41107	10 µg
PIM1, GST-tag	AMS.40152	10 µg
PIM2, GST-tag	AMS.40153	10 µg
PIM3, Active, GST-tag	AMS.41108	10 µg
PKAcα, GST-tag	AMS.40154	10 µg
PKAcβ, GST-tag	AMS.40155	10 µg
PKAcγ, GST-tag	AMS.40156	10 µg
PKC ι/λ, GST-tag	AMS.40015	10 µg
PKCα (PKCalpha), GST-tag	AMS.40157	10 µg
PKCβ I (PKCbeta1), GST-tag	AMS.40158	10 µg
PKCβ II (PKCbeta2), GST-tag	AMS.40159	10 µg
PKCδ (PKCdelta), GST-tag	AMS.40161	10 µg
PKCε (PKCepsilon), GST-tag	AMS.40162	10 µg
PKCη (PKCeta), GST-tag	AMS.40164	10 µg
PKCγ (PKCgamma), GST-tag	AMS.40160	10 µg
PKCμ (PKCmu), GST-tag	AMS.40166	10 µg
PKCν (PKCnu), GST-tag	AMS.40167	10 µg
PKCθ (PKCtheta), GST-tag	AMS.40165	10 µg
PKCζ (PKCzeta), GST-tag	AMS.40163	10 µg
PKD2, GST-tag	AMS.40168	10 µg
PKG1α, His-tag	AMS.40082	10 µg
PKG1β, His-tag	AMS.40083	10 µg
PKN2 (PRK2), GST-tag	AMS.40169	10 µg
PLK1 Polo Box Domain, GST-tag	AMS.50301	100 µg
PLK1, His-tag	AMS.40033	10 µg
PLK2, GST-tag	AMS.40034	10 µg
PLK3 Polo Box Domain, MBP-tag, His-tag	AMS.50302	100 µg
PLK3, His-tag	AMS.40035	10 µg
PLK4, GST-tag	AMS.40236	10 µg
PRKG1, GST-tag	AMS.40175	10 µg
PRKG2, GST-tag	AMS.40170	10 µg
PRKX, GST-tag	AMS.40171	10 µg

Serine Threonine Kinase continued

Serine Threonine	Cat. No.	Size
QIK, GST-tag	AMS.40264	10 µg
RIPK1, GST-Th-Tag	AMS.40371	10 µg
RIPK2, GST-tag	AMS.40173	10 µg
RIPK5, GST-tag	AMS.40174	10 µg
ROCK1, GST-tag	AMS.40085	10 µg
ROCK2, GST-tag	AMS.40086	10 µg
RSK1, GST-tag	AMS.40172	10 µg
RSK2, GST-tag	AMS.40181	10 µg
RSK3, GST-tag	AMS.40182	10 µg
RSK4, GST-tag	AMS.40183	10 µg
SGK1, GST-tag	AMS.40271	10 µg
SGK2, GST-tag	AMS.40272	10 µg
SGK3, GST-tag	AMS.40273	10 µg
SIK (SNF1LK), His-tag	AMS.40274	10 µg
SLK, GST-tag	AMS.40275	10 µg
SOK1, GST-tag	AMS.40276	10 µg
SRPK1, GST-tag	AMS.40277	10 µg
SRPK2, GST-tag	AMS.40278	10 µg
STK3(MST2), GST-tag	AMS.40013	10 µg
STK33, GST-tag	AMS.40093	10 µg
STK4(MST1), GST-tag	AMS.40017	10 µg
STYXL1	AMS.30027	100 µg
TAK1-TAB1, GST-tag	AMS.40279	10 µg
TAOK1, GST-tag	AMS.40283	10 µg
TAOK2, GST-tag	AMS.40284	10 µg
TBK1, GST-tag	AMS.40286	10 µg
TGFβR2, GST-tag	AMS.40707	50 µg
TLK2, GST-tag	AMS.40287	10 µg
TOPK, GST-tag	AMS.40288	10 µg
TSSK1B, GST-tag	AMS.40289	10 µg
TSSK2, GST-tag	AMS.40290	10 µg
TTBK1, GST-Tag, His-Tag	AMS.40309	10 µg
TTK, GST-tag	AMS.40291	10 µg
ULK1, FLAG-tag	AMS.40099	10 µg
ULK2, GST-tag	AMS.40294	10 µg
ULK3, His-tag	AMS.40295	10 µg
VRK1, Active Human Recombinant Protein, GST-tag	AMS.40397	10 µg
Wee1, GST-Th-Tag	AMS.40412	10 µg
ZAK, GST-tag	AMS.40297	10 µg

Substrates

Substrates	Cat. No.	Size
14-3-3 alpha/beta Protein, His-tag (Human)	AMS.79023	20 µg
14-3-3 alpha/beta Protein, His-tag (Mouse)	AMS.79024	20 µg
14-3-3 epsilon Protein, His-tag (Human)	AMS.79025	20 µg
14-3-3 epsilon Protein, His-tag (Mouse)	AMS.79026	20 µg
14-3-3 eta Protein (Human)	AMS.79029	20 µg
14-3-3 eta Protein, GST-tag (Human)	AMS.79031	20 µg
14-3-3 eta Protein, GST-tag (Human)	AMS.79030	20 µg
14-3-3 eta Protein, His-tag (Human)	AMS.79027	20 µg
14-3-3 eta Protein, His-tag (Mouse)	AMS.79028	20 µg
14-3-3 gamma Protein (Human)	AMS.79034	20 µg
14-3-3 gamma Protein, GST-tag	AMS.79035	20 µg
14-3-3 gamma Protein, GST-tag	AMS.79036	20 µg
14-3-3 gamma Protein, His-tag (Human)	AMS.79033	20 µg
14-3-3 gamma Protein, His-tag (Mouse)	AMS.79032	20 µg
14-3-3 sigma Protein, His-tag (Human)	AMS.79037	20 µg
14-3-3 theta Protein, His-tag (Human)	AMS.79038	20 µg
14-3-3 zeta Protein, His-tag (Human)	AMS.79039	20 µg
14-3-3 zeta Protein, His-tag (Mouse)	AMS.79040	20 µg
AKT1, Inactive, His-tag	AMS.40000	100 µg
ATF2, GST-tag	AMS.40520	1 mg
c-Myc, His-tag	AMS.40453	100 µg
Calmodulin, His-tag	AMS 81152	50 µg
CERK Substrate	AMS.40618	150 rxns
CERK Substrate	AMS.40619	300 rxns
Cofilin 1, GST-tag	AMS.40525	200 µg

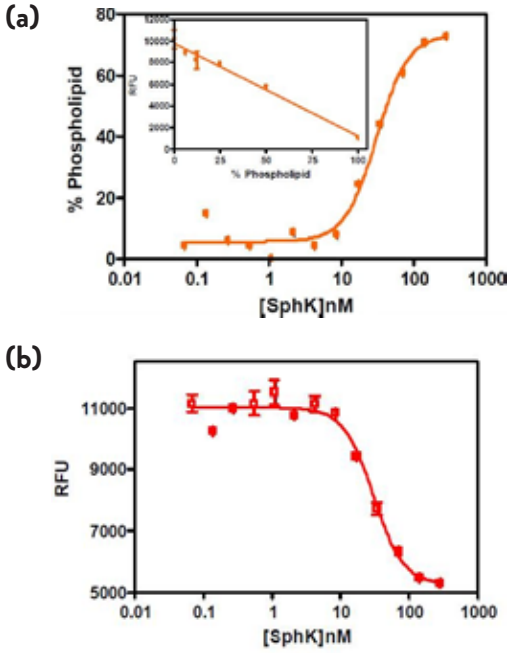


Figure 44. *Enzyme Dose Response Curve. Decreasing concentrations of sphingosine kinase 1 (Cat. #AMS.40610) were assayed in the presence of ATP (a). Product conversion was determined (b) by back calculation using phospholipid calibrators (a-inset)*

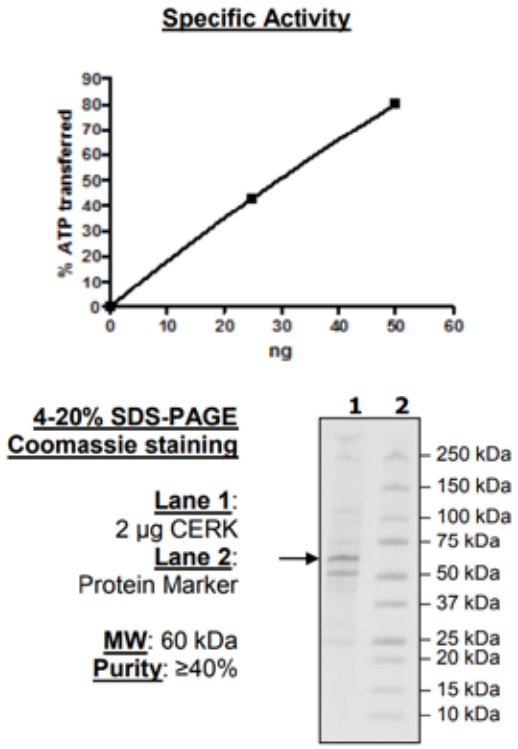


Figure 45. *Activity and purity of CERK (Cat.#AMS.40617).*

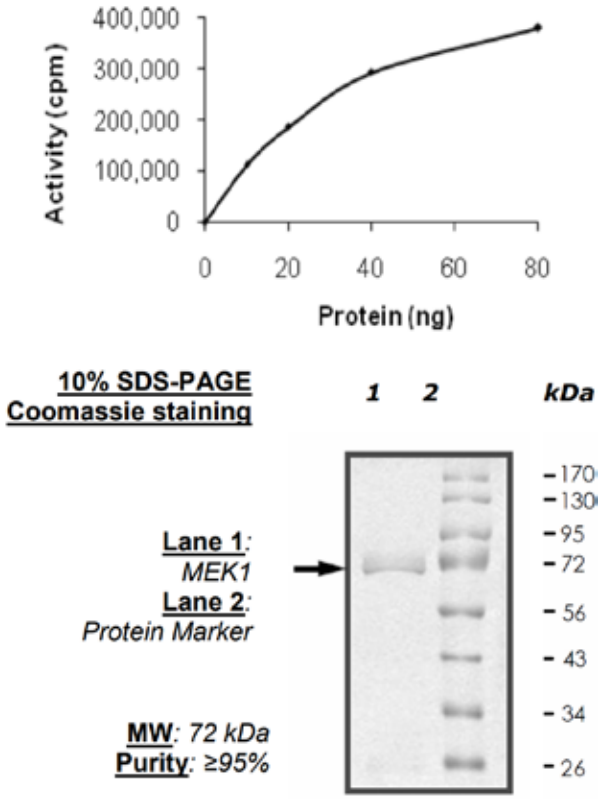
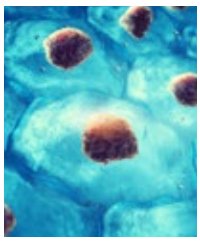


Figure 46. *MEK1 quality assurance Cat. #AMS.40123*

Inhibitors

Inhibitors	Cat. No.	Size
A-769662	AMS.27057	5 mg
Afatinib	AMS.27009	10 mg
Alvocidib	AMS.27058	25 mg
Axitinib	AMS.27064	10 mg
Cediranib	AMS.27036	5 mg
CHIR-99021 (CT99021)	AMS.27614-3	100 mg
CHIR-99021 (CT99021)	AMS.27614-1	5 mg
CHIR-99021 (CT99021)	AMS.27614-2	25 mg
CHIR-99021 (CT99021) HCl	AMS.27615-2	5 mg
CHIR-99021 (CT99021) HCl	AMS.27615-3	100 mg
Doramapimod	AMS.27034	25 mg
Fasudil	AMS.27029	250 mg
GDC-0941	AMS.27000	10 mg
Gefitinib	AMS.27032	1 g
Geldanamycin	AMS.27008	5 mg
HA-1077	AMS.27030	250 mg
K252a	AMS.27033	1 mg
KU-0063794	AMS.27039	5 mg
LY-294002	AMS.27038	50 mg
OSU-03012	AMS.27060	10 mg
PD 173074	AMS.27056	5 mg
PI-103	AMS.27502-1	5 mg
PI-103	AMS.27502-2	25 mg
PIK-75	AMS.27001	10 mg
PP242	AMS.27063	10 mg
Rapamycin	AMS.27062	50 mg
Ruxolitinib, Phosphate	AMS.27059	10 mg
SGI-1776 free base	AMS.27651-2	10 mg
SGI-1776 free base	AMS.27651-3	50 mg
SGI-1776 free base	AMS.27651-1	5 mg
SMI-4a	AMS.27774-1	10 mg
SMI-4a	AMS.27774-2	50 mg
Sorafenib Tosylate	AMS.27014	100 mg
Staurosporine	AMS.27002	1 mg
Temsirolimus	AMS.27024	10 mg
Tofacitinib	AMS.27037	10 mg
Tyrphostin AG 1478	AMS.27035	25 mg
U0126	AMS.27012	5 mg
Wortmannin	AMS.27031	10 mg
Roscovitine	AMS.27040	10 mg

CELL BASED ASSAY KITS



Cell-based assay kits are useful tools for monitoring signaling pathway activity, to study the effects of RNAi or gene overexpression, and to screen for small molecule inhibitors. The kits come with transfection-ready DNA plasmids, many of which contain luciferase reporter plasmids under the control of response elements specific to the cell signaling pathway being studied.

Phosphodiesterase

Phosphodiesterase	Cat. No.	Size
ANPRA/Aequorin Expression vector	AMS.60641	20 µg
CNGA2 Expression vector	AMS.60642	20 µg
PDE1B Cell-Based Reporter Assay Kit	AMS.60601	500 reactions
PDE4D Cell-Based Reporter Assay Kit	AMS. 0505	500 reactions

Immunotherapy

Phosphodiesterase	Cat. No.	Size
CSF1R / SRE Reporter Kit (MAPK/ERK Signaling Pathway)	79379	500 reactions
IDO1 Cell-Based Assay Kit	72031	100 reactions
IDO1 Cellular Activity QuickDetect™ Supplements	62000-1	100 reactions
IDO1 Cellular Activity QuickDetect™ Supplements	62000-2	1000 reactions
IDO2 Cellular Activity QuickDetect™ Supplements	62001-2	1000 reactions
IDO2 Cellular Activity QuickDetect™ Supplements	62001-1	100 reactions
PD-1:PD-L1/PD-L2 Cell-Based Inhibitor Screening Assay Kit	60800	96 reactions
PD-L1 / TCR Activator Mammalian Expression Kit	60610	500 reactions
PD-L2/TCR Activator Mammalian Expression Kit	60620	500 reactions
TDO Cell-Based Assay Kit	72033	100 reactions
Woodchuck PD-L1 / TCR Activator Mammalian Expression Kit	79455	500 Reactions

Cell Signaling Pathways

Cell Signaling Pathways	Cat. No.	Size
AP1 Reporter Kit (JNK Pathway)	60612	500 reactions
ARE Reporter Kit (Nrf2 Antioxidant Pathway)	60514	500 reactions
CRE/CREB Reporter Kit (cAMP/PKA Signaling Pathway)	60611	500 reactions
Dual Luciferase (Firefly-Renilla) Assay System	60683-1	10 ml
Dual Luciferase (Firefly-Renilla) Assay System	60683-2	100 ml
Dual Luciferase (Firefly-Renilla) Assay System	60683-3	1 L
FOXO Reporter Kit (PI3K/AKT Pathway)	60643	500 reactions
GAL4 Reporter Kit (Glucocorticoid Receptor Pathway)	60522	500 reactions
IDO1 Cell-Based Assay Kit	72031	100 reactions
ISRE Reporter Kit (JAK/STAT Signaling Pathway)	60613	500 reactions
Myc Reporter Kit (Myc Signaling Pathway)	60519	500 reactions
NF-κB Reporter Kit (NF-κB Signaling Pathway)	60614	500 reactions
Notch1/CSL Reporter Kit (Notch Signaling Pathway)	60509	500 reactions
ONE-Step™ Luciferase Assay System - 1L	60690-3	1 L
ONE-Step™ Luciferase Assay System - 10 ml	60690-1	10 ml
ONE-Step™ Luciferase Assay System - 100 ml	60690-2	100 ml
ONE-Step™ Luciferase Assay System - 500 ml	60690-5	500 mL
SBE Reporter Kit (TGFβ/SMAD signaling pathway)	60654	500 reactions
SRE Reporter Kit (MAPK/ERK Signaling Pathway)	60511	500 reactions
TCF/LEF Reporter Kit (Wnt Signaling Pathway)	60500	500 reactions
TCR Activator / PD-L1 Mammalian Expression Kit	60610	500 reactions
TCR Activator / PD-L2 Mammalian Expression Kit	60620	500 reactions
TDO Cell-Based Assay Kit	72033	100 reactions
Transfection Collection™ : ISRE Transient Pack JAK/STAT Signaling Pathway	79264	500 reactions
Transfection Collection™ : AP1 Transient Pack (JNK Signaling Pathway)	79266	500 reactions

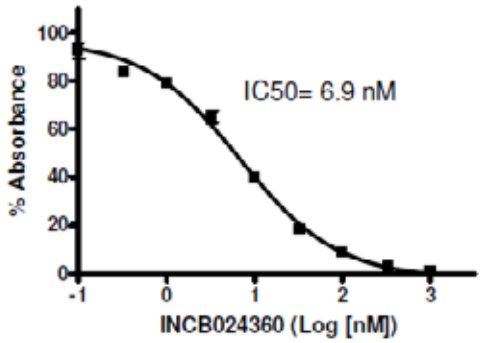


Figure 47. *Dose response of hIDO1 activity to reference inhibitor INCB024360 Cat. #AMS.72031*

Protein tyrosine phosphatases (PTPs) are involved in a variety of cellular processes such as signal transduction, cell cycle regulation, and differentiation. The transmembrane Receptor Protein Tyrosine Phosphatases (RPTPs) are key regulators of cell-cell adhesion, immune signaling, and neuronal morphogenesis throughout vertebrate and invertebrate systems. Regulators of RPTPs have been proposed as potential therapeutics for diabetes, obesity, CNS disorders, COPD, and cardiovascular disorders.

Receptor Tyrosine

Receptor Tyrosine	Cat. No.	Size
CD45(PTPRC), His-tag	AMS.30044	20 µg
DEP1(PTPRJ), GST-tag	AMS.30050	20 µg
LAR (PTPRF), GST-tag	AMS.30046	20 µg
PTPσ (PTPRS), GST-tag	AMS.30045	20 µg
PTPIA2(PTPRN), GST-tag	AMS.30054	20 µg
PTPβ, GST-tag	AMS.30042	20 µg
PTPμ (PTPRM), GST-tag	AMS.30053	20 µg
RPTPγ (PTPRG), GST-tag	AMS.30047	20 µg

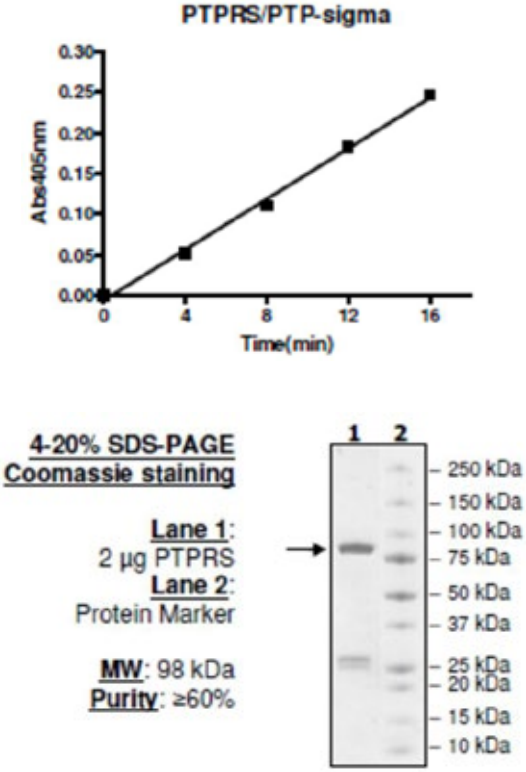


Figure 48. *Activity and purity of PTPRS (Cat.#AMS.30045).*

Non-Receptor

The cytoplasmic non-receptor tyrosine phosphatases (PTPNs) affect numerous regulatory pathways, including the regulation of MAPK signaling and Fc receptor-mediated activation of mast cells and basophils. AMSBIO provides an extensive line of full-length, active PTPNs suitable for enzymatic profiling and inhibitor screening assays.

Non-Receptor	Cat. No.	Size
Bas (PTPN13), GST-tag	AMS.30024	20 µg
MEG-1 (PTPN4), GST-tag	AMS.30015	20 µg
MEG-2 (PTPN9), GST-tag	AMS.30020	20 µg
Mouse PTP1B(1-321)/PTPN, GST-tag	AMS.30012	20 µg
PEST (PTPN12), GST-tag	AMS.30023	20 µg
PRL1 (2-173), His-tag	AMS.30000	50 µg
PRL2 (2-167), His-tag	AMS.30001	50 µg
PRL3 (2-173), His-tag	AMS.30002	50 µg
PTP-D2/PTPN14, GST-tag	AMS.30025	20 µg
PTP1B (PTPN1) full length, GST-tag	AMS.30009	20 µg
PTP1B Colorimetric Assay Kit	AMS.30019	96 rxns
PTP1B(1-321)/PTPN1, GST-tag	AMS.30010	20 µg
PTPMT1, GST-tag	AMS.30026	100 µg
Rat PTP1B(1-321)/PTPN1, GST-tag	AMS.30011	20 µg
SHP-1(PTPN6), GST-tag	AMS.30021	20 µg
SHP-2 (PTPN11), GST-tag	AMS.30022	20 µg
SHP-2, His-Tag	AMS.79018	20 µg
TC-PTP(PTPN2), GST-tag	AMS.30013	20 µg

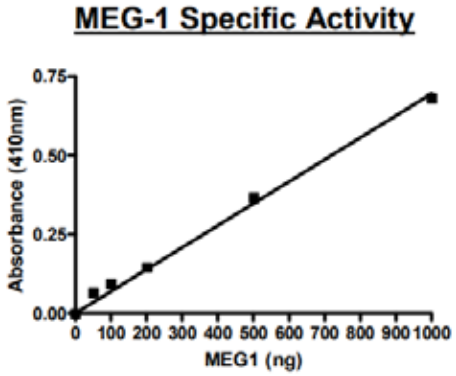


Figure 49. *Activity and purity of MEG1 (Cat.#AMS.30015).*

Serine

Serine	Cat. No.	Size
PP1A, Active, GST-tag	AMS.41106	10 µg
PP2A-α, His-tag/PP2AR, GST-tag	AMS.30056	20 µg
STYXL1	AMS.30027	100 µg

PROTEASE

Protease is the name given to a class of enzymes that catalyze protein catabolism by hydrolysis of the peptide bonds linking amino acids together. Proteases are involved in protein processing, regulation of protein function, apoptosis, viral pathogenesis, digestion, photosynthesis, and numerous other vital processes. Proteases offer a valuable target in many therapeutic settings, including Alzheimer's, cancer, and viral infection. In fact, one of the most widely-used classes of anti-viral therapeutics is protease inhibitors, which are used to treat both HIV and HCV infections.

Assay Kits

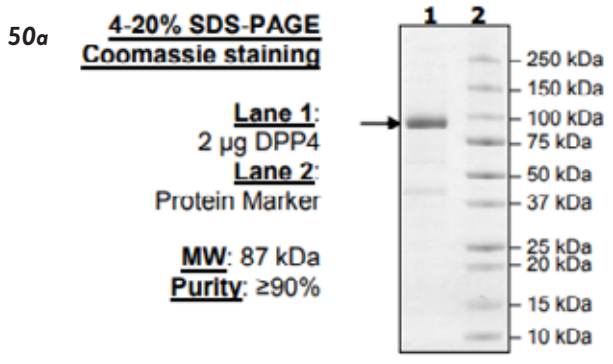
Assay Kits	Cat. No.	Size
DPP3 Assay Kit	AMS.80203	96 rxns
DPP4 Assay Kit	AMS.80204	96 rxns
DPP7 Assay Kit	AMS.80207	96 rxns
DPP8 Assay Kit	AMS.80208	96 rxns
DPP9 Assay Kit	AMS.80209	96 rxns
FAP Assay Kit	AMS.80210	96 rxns
POP Assay Kit	AMS.80106	96 rxns
Renin Assay Kit	AMS.80211	96 rxns
Caspase-3 Homogeneous Assay Kit	AMS.80700	96 rxns
Caspase-6 Homogeneous Assay Kit	AMS.80703	96 rxns
Caspase-7 Homogeneous Assay Kit	AMS.80701	96 rxns
Caspase-8 Homogeneous Assay Kit	AMS.80704	96 rxns
DPP Assay Buffer	AMS.80300	20 ml

Substrates

Substrates	Cat. No.	Size
Fluorogenic Cathepsin F Substrate	AMS.80350	100 µl
Fluorogenic Cathepsin V Substrate	AMS.80349	100 µl
Fluorogenic DPP substrate1	AMS.80305	100 µl
Fluorogenic DPP substrate2	AMS.80332	100 µl

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
Ac-DEVD-CMK	AMS.27315	5 mg
Aclacinomycin A	AMS.27700	10 mg
Aliskiren Hydrochloride	AMS.27300	1 mg
AT13387	AMS.27736-2	10 mg
AT13387	AMS.27736-1	5 mg
BMS-790052	AMS.27054	5 mg
Bortezomib	AMS.27028	5 mg
Brefeldin A	AMS.27042	10 mg
Camostat Mesilate (FOY-305)	AMS.27055	10 mg
Danoprevir	AMS.27052	2 mg
DBeQ	AMS.27703-2	25 mg
Ganetespib (STA-9090)	AMS.27750-1	5 mg
Ganetespib (STA-9090)	AMS.27750-2	10 mg
IPI-504 (Retaspimycin hydrochloride)	AMS.27753-2	5 mg
IPI-504 (Retaspimycin hydrochloride)	AMS.27753-1	10 mg
KW-2478	AMS.27758-1	10 mg
KW-2478	AMS.27758-2	50 mg
KW-2478	AMS.27758-3	5 mg
Nutlin-3	AMS.27711	5 mg
NVP-BEP800	AMS.27766-1	10 mg
NVP-BEP800	AMS.27766-2	5 mg
NVP-BEP800	AMS.27766-3	25 mg
Obatoclax	AMS.27044	5 mg
Oxyresveratrol	AMS.27318	500 mg
P22077	AMS.27712-2	50 mg
PAC-1	AMS.27043	10 mg
PCI 34051	AMS.27316	50 mg
PYR-41	AMS.27716-3	50 mg
Sitagliptin	AMS.27106	200 mg
Telaprevir (VX-950)	AMS.27051	5 mg
Thalidomide	AMS.27721-2	500 mg
Trimidox	AMS.27320	100 mg
Trimidox	AMS.27319	50 mg
VX-222	AMS.27053	5 mg
Z-DEVD-FMK	AMS.27314	5 mg
Z-VAD(OMe)-FMK	AMS.27313	5 mg
Z-VAD-FMK, Methyl Ester	AMS.27017	1 mg



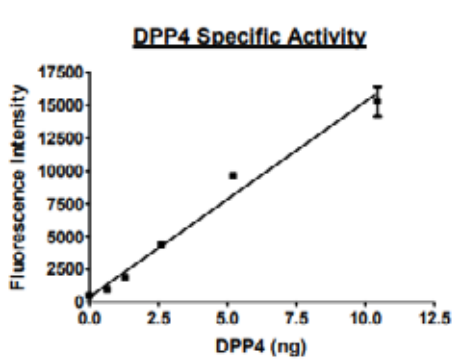


Figure 50. *Activity and purity of DPP4 (Cat.#AMS.80040).*

Enzymes

AMSBIO provides an extensive line of highly active, full-length human proteases suitable for enzymatic profiling, inhibitor screening assays, and drug discovery.

Enzymes	Cat. No.	Size
Activated Protein C (PROC), His-tag	AMS.70019	20 µg
BACE1, His-Tag (Human)	AMS.71657	100 µg
Caspase3, His-tag	AMS.80500	50 µg
Caspase6, His-tag	AMS.80113	50 µg
Caspase7, His-tag	AMS.70000	50 µg
Caspase8, His-tag	AMS.80114	50 µg
Caspase9, His-tag	AMS.80115	50 µg
Cathepsin B, His-tag	AMS.80001	10 µg
Cathepsin F, His-tag	AMS.80003	50 µg
Cathepsin L, His-tag	AMS.80005	10 µg
Cathepsin S, His-tag	AMS.80008	10 µg
Cathepsin V, His-tag	AMS.80009	10 µg
DPP3, GST-tag	AMS.80030	10 µg
DPP4, His-tag	AMS.80040	10 µg
DPP7, His-tag	AMS.80070	10 µg
DPP8, GST-tag	AMS.80080	10 µg
DPP9, GST-Tag	AMS.80090	10 µg
FAP, His-tag	AMS.80100	10 µg
HCV1a (D168E), FLAG-His-tags	AMS.80102	20 µg
HCV1a (D168V), FLAG-His-tags	AMS.80103	20 µg
HCV1a (R155K), FLAG-His-tags	AMS.80101	20 µg
HCV1a, FLAG-His-tags	AMS.80010	20 µg
HCV1b (D168V), FLAG-His-tags	AMS.80110	20 µg
HCV1b (R155K), FLAG-His-tags	AMS.80109	20 µg
HCV1b (R155Q), FLAG-His-tags	AMS.80104	20 µg
HCV1b, FLAG-His-tags	AMS.80107	20 µg
HCV2a, FLAG-His-tags	AMS.80108	20 µg
HRV 3C Protease, His-GST-tags	AMS.50319	1000 Units
Human factor Xa	AMS.80112	100 units
Human α Thrombin	AMS.80111	1000 units
IDE, His-tag	AMS.70002	20 µg
IdeS, His-Tag	AMS.80206-2	5000 units
IdeS, His-Tag	AMS.80206-1	2500 units
MME, His-tag	AMS.80212	20 µg
MMP1, His-tag	AMS.80214	20 µg
MMP2, His-tag (HEK293-derived)	AMS.80213	20 µg
MMP9 (Q279R), His-tag	AMS.80215	20 µg
PrCP, His-tag	AMS.80380	10 µg
Prolyl Oligopeptidase/Prolyl Endopeptidase, His-tag	AMS.80105	20 µg
Rat Renin, His-tag	AMS.80201	100 µg
Renin, His-tag	AMS.80200	100 µg
TurboTEV Protease	AMS.50308	10000 units

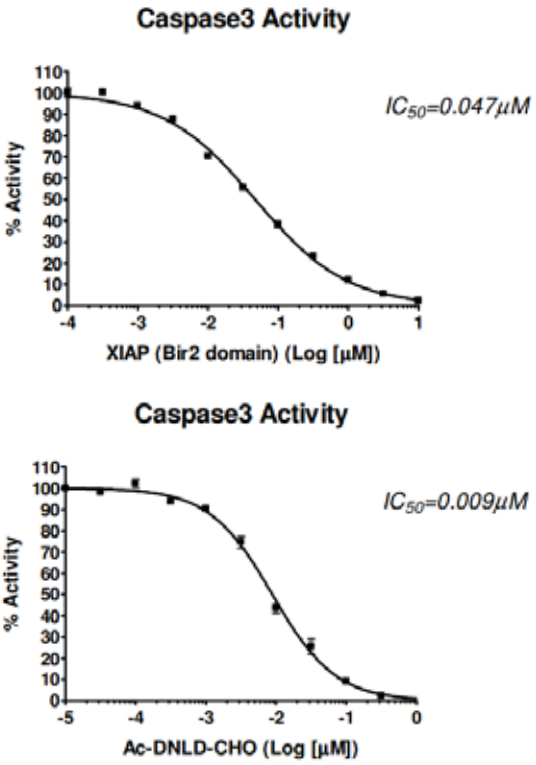


Figure 51. *Inhibition of Caspase-3 enzyme activity using XIAP Bir2 domain (above) or Ac-DNLD-CHO (below), measured using the Homogeneous Caspase-3 Assay Kit, Cat. #AMS.80700. Fluorescence intensity was measured using a Tecan fluorescent microplate reader*

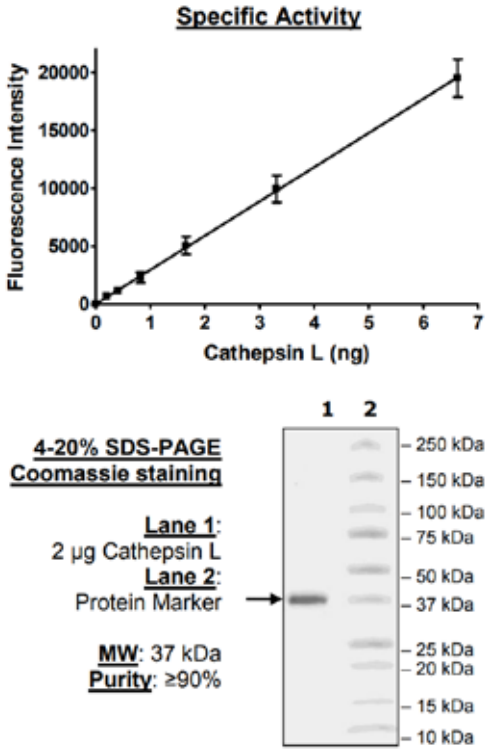


Figure 52. *Cathepsin L quality assurance Cat. #AMS.80005*

UBIQUITINATION

The ubiquitin pathway is critical for labeling proteins for proteosomal degradation. Additionally, ubiquitination also controls the stability, function, and intracellular localization of a wide variety of proteins. Researchers are actively identifying new components of the complex cascade of ubiquitin-activating (E1), conjugating (E2), and ligating (E3) enzymes, as well as investigating ubiquitin-regulated pathways such as apoptosis, DNA repair, epigenetic modification of histones, and embryonic development. AMSBIO provides many unique enzymes for the study of these regulatory pathways.

Activating Enzyme (E1)

Description	Cat. No.	Size
NEDD8 E1, His-tag	AMS.81087	50 µg
UBA6 (UBE1L2), FLAG-tag	AMS.80303	100 µg
UBE1 (UBA1), FLAG-tag	AMS.80301	100 µg

Conjugating Enzyme (E2)

Description	Cat. No.	Size
UbcH13 (UBE2N), His-tag	AMS.80323	100 µg
UbcH5a (UBE2D1), His-tag	AMS.80315	100 µg
UbcH5b, His-Tag (Human)	AMS.80314	100 µg
UbcH5c, His-Tag (Human)	AMS.80313	100 µg
UbcH6 (UBE2E1), His-tag	AMS.80316	100 µg
UbcH7, His-tag (E. coli-derived)	AMS.80317	100 µg
UbcH7, His-tag (Sf9-derived)	AMS.80318	50 µg
UEV1A (UBE2V1), FLAG-tag	AMS.80325	100 µg

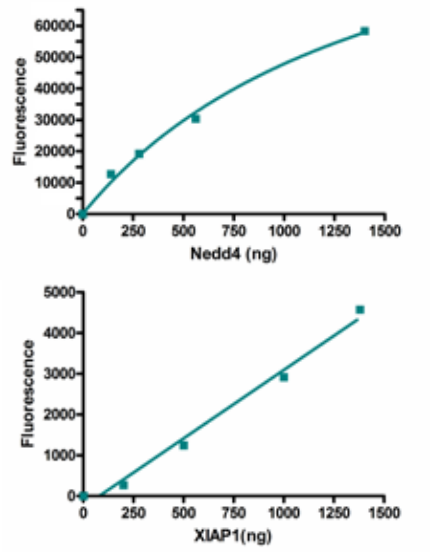


Figure 53. *Specific activity of the Nedd4 (Cat. #AMS.80404) and XIAP (Cat. #AMS.80401) ubiquitin ligases, as measured by fluorescence assay.*

Deubiquitylating Enzymes

Ubiquitination is reversible, and the diverse group of isopeptidases that remove the ubiquitin moiety (deubiquitinases) are emerging as important regulators of signaling pathways, including apoptosis, proliferation, chromatin regulation, and cancer.

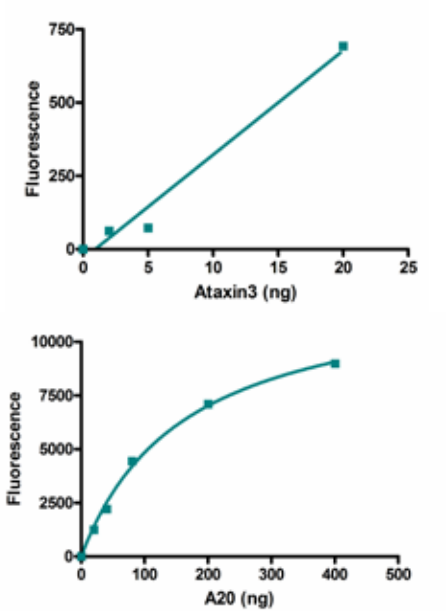


Figure 54. *Specific activity of Ataxin-3 (Cat. #AMS.80399) and A20 deubiquitinase (Cat. #AMS.80394), measured by fluorescence assay using Ub-AMC as substrate.*

Description	Cat. No.	Size
A20, FLAG-tag (Sf9-derived)	AMS.80394	50 µg
A20, His tag, FLAG-tag (Sf9-derived)	AMS.80408	50 µg
A20, His-tag (E. coli-derived)	AMS.80393	100 µg
AMSH Core Domain, His-tag	AMS.81081	25 µg
AMSH, His-tag	AMS.81080	25 µg
Ataxin3 (MJD1, SCA3), His-tag	AMS.80399	250 µg
Ataxin3-Like, His-tag	AMS.81082	25 µg
Bap1, His-tag	AMS.81083	25 µg
Den1, GST-tag	AMS.81084	25 µg
JosD1, His-tag	AMS.81085	25 µg
JosD2, His-tag	AMS.81086	25 µg
Otub1, His-tag	AMS.81088	25 µg
Otub2, His-tag	AMS.81089	25 µg
OTUD6B, His-FLAG-tags	AMS.80407	50 µg
PLP2, His-tag	AMS.81090	25 µg
PLPro, His-tag	AMS.81091	25 µg
SENP1 Core Domain, His-tag	AMS.81092	25 µg
SENP2, His-tag	AMS.81095	5000 units
SENP2, His-tag	AMS.81096	500 units
SENP6 Core Domain, His-tag	AMS.81097	25 µg
Ssel, His-tag	AMS.81098	25 µg
Ubiquitin AMC	AMS.81150	50 µg

Deubiquitylating Enzymes continued

Description	Cat. No.	Size
Ubiquitin-Rhodamine	AMS.81151	50 µg
UCH-L5, SUMO-His-tags	AMS.81099	25 µg
UCHL1 (PGP9.5), His-tag	AMS.80351	100 µg
UCHL3, His-tag	AMS.80353	100 µg
USP10, FLAG-tag	AMS.80360	50 µg
USP14, FLAG-tag	AMS.80364	50 µg
USP15, SUMO-His-tags	AMS.81100	25 µg
USP2, FLAG-tag (Sf9-derived)	AMS.80352	50 µg
USP2, His-tag (E. coli-derived)	AMS.80392	100 µg
USP21, SUMO-His-tags	AMS.81101	25 µg
USP33 Core Domain, SUMO-His-tags	AMS.81102	25 µg
USP5 (IsoT), FLAG-tag	AMS.80355	50 µg
USP51, SUMO-His-tags	AMS.81103	25 µg
USP7, His-FLAG-tags	AMS.80395	100 µg
USP8, FLAG-tag	AMS.80358	50 µg
Yod1, His-tag	AMS.81104	25 µg

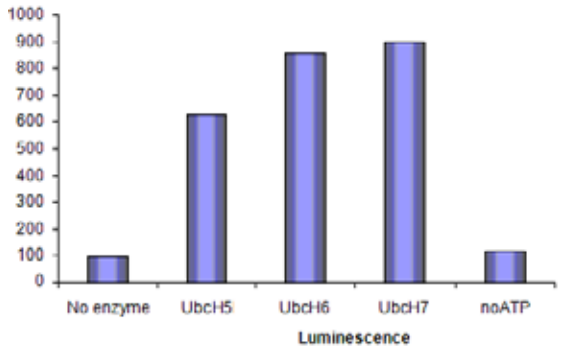


Figure 55. *Luminescent assay demonstrating activity of UbcH5 (Cat. #AMS.80315), UbcH6 (Cat. #AMS.80316), and UbcH7 (Cat. #AMS.80317), using UBE1 as E1 activating enzyme and Smurf1 as E3 ligase.*

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
(R) - MG132	AMS.27226	1 mg
1,10-Phenanthroline, Monohydrate	AMS.27713	0.5 ml
b-AP15 (NSC-687852)	AMS.27701-1	5 mg
b-AP15 (NSC-687852)	AMS.27701-2	25 mg
Celastrol	AMS.27702-2	50 mg
Celastrol	AMS.27702-1	10 mg
Clasto-lactacystin β-lactone	AMS.27224	50 µg
DBeQ	AMS.27703-1	10 mg
IU1	AMS.27227	10 mg
Lactacystin	AMS.27705	200 µg
LDN-57444	AMS.27706-2	50 mg
LDN-57444	AMS.27706-1	10 mg
MDBN	AMS.27707	25 mg
MLN-4924	AMS.27708	1 mg
NSC-632839	AMS.27709-1	10 mg
NSC-632839	AMS.27709-2	50 mg
NSC-66811	AMS.27710	10 mg
NSC697923	AMS.27765-2	25 mg
NSC697923	AMS.27765-1	10 mg
P005091	AMS.27767-1	10 mg
P005091	AMS.27767-2	50 mg
P22077	AMS.27712-1	10 mg
PR-619	AMS.27714-1	5 mg
PR-619 (5X5MG)	AMS.27714-2	5x5 mg
PS-341 (MG-341)	AMS.27715-1	25 mg
PS-341 (MG-341)	AMS.27715-2	5 mg
PYR-41	AMS.27716-1	10 mg
PYR-41	AMS.27716-2	25 mg
SL-01	AMS.27717	50 mg
SMER3	AMS.27718-2	50 mg
SMER3	AMS.27718-1	10 mg
TAME-HCL	AMS.27719	100 mg
TCID	AMS.27720-1	10 mg
TCID	AMS.27720-2	50 mg
Thalidomide	AMS.27721-1	200 mg
WP1130	AMS.27722-2	25 mg
WP1130	AMS.27722-1	5 mg

Ligases (E3)

CARP2, SUMO-His-tags 81050 25 µg		
CBL-B (Y363F), His-tag, Biotin-labeled (Human)	AMS.80413	50 µg
CBL-B, GST-Tag (Human)	AMS.80415	100 µg
CBL-B, His-Avi-Tag	AMS.80414	100 µg
CBL-B, His-tag, Biotin-labeled (Human)	AMS.80412	50 µg
CUL3/Rbx1, GST-tag	AMS.80409	20 µg
Hrd1, SUMO-His-tags	AMS.81051	25 µg
KCTD13, GST-tag	AMS.80410	20 µg
MDM2, GST-tag	AMS.80751	20 µg
MuRF1, SUMO-His-tags	AMS.81052	25 µg
MuRF2, SUMO-tag	AMS.81053	25 µg
MuRF3, SUMO-His-tags	AMS.81054	25 µg
NEDD4, FLAG-tag	AMS.80404	20 µg
Praja1, SUMO-tag	AMS.81055	25 µg
RNF20, His-FLAG-tags	AMS.80406	20 µg
SMURF1, FLAG-tag	AMS.80402	20 µg
SMURF2, FLAG-tag	AMS.80403	20 µg
UBE3A, His-FLAG-tags	AMS.80302	20 µg
UFL1, GST-tag	AMS.80411	20 µg
UHRF1, His-FLAG-tags	AMS.55001	50 µg
WWP1, FLAG-tag	AMS.80405	20 µg
XIAP, FLAG-tag	AMS.80401	20 µg

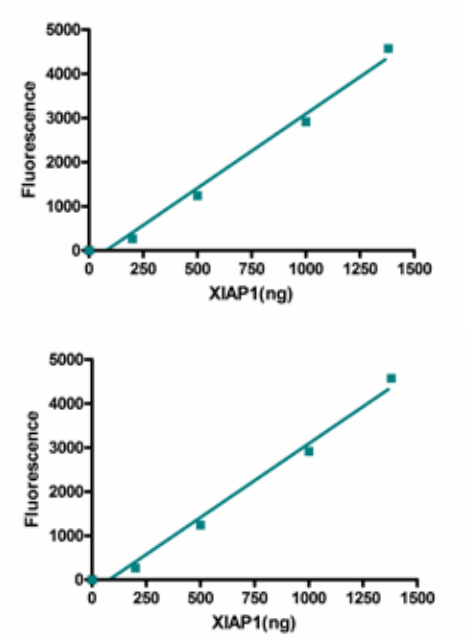
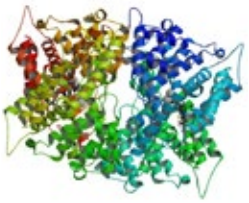


Figure 56. *Specific activity (by fluorescence assay) and purity (by Coomassie blue staining) of the E3 ubiquitin ligase SMURF1 (Cat. #AMS.80402).*

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cGMP signaling. Inhibitors of PDEs are key pharmacological targets for heart disease, hypertension, depression, dementia, erectile disfunction, and Duchenne's muscular dystrophy.



Assay Kits

AMSBIO's PDE kits are designed for identification of PDE inhibitors using fluorescence polarization. The kits are provided in a convenient 96-well format and contain all necessary reagents to rapidly quantify PDEs in a simple, sensitive fluorescent assay.

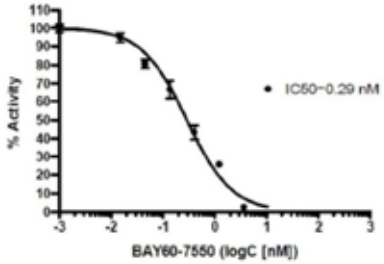


Figure 57. *Inhibition of PDE2A activity by BAY60-7550 using the PDE2A Assay Kit (Cat. #AMS.60320).*

Assay Kits	Cat. No.	Size
PDE Assay Kit	AMS.60300	96 rxns
PDE10A Assay Kit	AMS.60400	96 rxns
PDE10A1 TR-FRET Assay Kit	AMS.60709	96 rxns
PDE10A2 TR-FRET Assay Kit	AMS.60710	96 rxns
PDE11A Assay Kit	AMS.60411	96 rxns
PDE1A Assay Kit	AMS.60310	96 rxns
PDE1B Assay Kit	AMS.60311	96 rxns
PDE1B TR-FRET Assay Kit	AMS.60704	96 rxns
PDE1C Assay Kit	AMS.60312	96 rxns
PDE1C Mouse Assay Kit	AMS.61312	96 rxns
PDE1C TR-FRET Assay Kit	AMS.60705	96 rxns
PDE2A Assay Kit	AMS.60320	96 rxns
PDE3A Assay Kit	AMS.60330	96 rxns
PDE3A TR-FRET Assay Kit	AMS.60706	96 rxns
PDE3B Assay Kit	AMS.60331	96 rxns
PDE4A Assay Kit	AMS.60340	96 rxns
PDE4B2 Assay Kit	AMS.60343	96 rxns
PDE4D2 Assay Kit	AMS.60345	96 rxns
PDE4D2 TR-FRET Assay Kit	AMS.60707	96 rxns
PDE4D3 Assay Kit	AMS.60346	96 rxns
PDE4D3 TR-FRET Assay Kit	AMS.60701	96 rxns
PDE4D7 TR-FRET Assay Kit	AMS.60708	96 rxns
PDE5A1 Assay Kit	AMS.60350	96 rxns
PDE7A Assay Kit	AMS.60370	96 rxns
PDE7B Assay Kit	AMS.60371	96 rxns

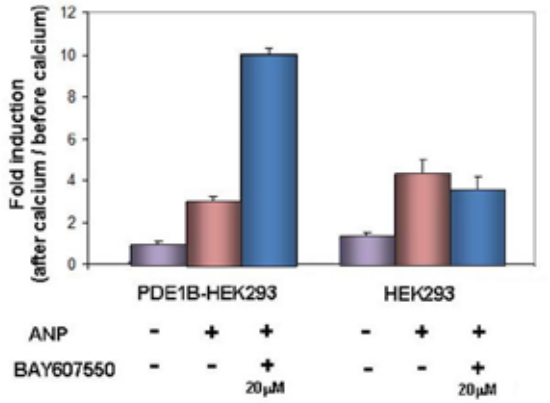


Figure 58. *Results using the PDE1B Cell-ased Reporter Assay, Cat. #AMS.60601. PDE1B-HEK293 or HEK293 cells were transiently transfected with ANP receptor, CNGA2 and aequorin, and activated by ANP, with or without the PDE inhibitor BAY60-7550. BAY60-7550 significantly potentiated the ANP-induced cGMP level in PDE1B-HEK293 cells but not in parental HEK293 cells, resulting in calcium influx that stimulated luminescence signals.*

Assay Kits Components

Assay Kit Components	Cat. No.	Size
PDE Assay Buffer	AMS.60393	12 ml
PDE Binding Agent	AMS.60390	100 µl
PDE Binding agent diluent (cAMP)	AMS.60391	10 ml
PDE Binding agent diluent (cGMP)	AMS.60392	10 ml
Terbium (Tb) Donor	AMS.60394	30 µl

Stable Cell Lines

Stable Cell Lines	Cat. No.	Size
PDE10A-HEK293 Recombinant Cell line	AMS.60410	2 vials
PDE1B-HEK293 Recombinant Cell line	AMS.60402	2 vials
PDE7A-HEK293 Recombinant Cell Line	AMS.60407	2 vials
PDE7B-HEK293 Recombinant Cell Line	AMS.60412	2 vials
rPDE7A-HEK293 Recombinant Cell Line	AMS.60408	2 vials

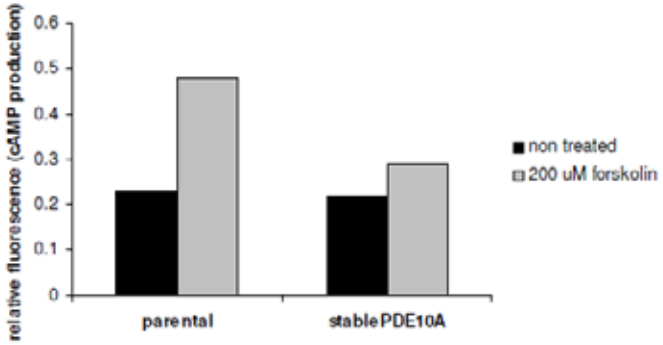


Figure 59. *PDE10A2 overexpression reduces cAMP accumulation following forskolin stimulation, Cat. #AMS.60410*

Enzymes

PDE enzymes from AMSBIO are perfect for enzyme kinetics studies, selectivity profiling, or inhibitor screening. The enzymes are provided as full-length, highly active enzymes expressed in Sf9 cells. Enzyme activity is validated on every lot to ensure successful assays.

Enzymes	Cat. No.	Size
Dog PDE4B, GST-tag	AMS.60055	5 µg
Dog PDE4D, GST-tag	AMS.60056	5 µg
Mouse PDE10A, GST-tag	AMS.60101	10 µg
Mouse PDE1C, GST-tag	AMS.60012	10 µg
Mouse PDE5A1, GST-tag	AMS.60051	5 µg
Mouse PDE7A, GST-tag	AMS.60072	10 µg
Mouse PDE7B, GST-tag	AMS.60073	10 µg
PDE10A1, GST-tag	AMS.60099	10 µg
PDE10A2, GST-tag	AMS.60100	10 µg
PDE11A, GST-Tag (Mouse)	AMS.60064	5 µg
PDE11A4, GST-tag	AMS.60110	10 µg
PDE1A, GST-tag	AMS.60010	10 µg
PDE1B, GST-tag	AMS.60011	10 µg
PDE1C, GST-tag	AMS.60013	10 µg
PDE2A V1 (Mouse), GST-tag	AMS.60017	5 µg
PDE2A V2 (Mouse), GST-tag	AMS.60018	5 µg
PDE2A V4 (Mouse), GST-tag	AMS.60019	5 µg
PDE2A, FLAG-tag	AMS.60021	5 µg
PDE2A, GST-tag	AMS.60020	5 µg
PDE3A (Mouse), GST-Tag	AMS.60036	5 µg
PDE3A, (484-end), GST-tag	AMS.60030	10 µg
PDE3A, (669-end), His-GST-tags	AMS.60032	5 µg
PDE3B, GST-tag	AMS.60031	10 µg
PDE4A10, GST-tag	AMS.60038	10 µg
PDE4A1A, GST-tag	AMS.60040	10 µg
PDE4A4B, GST-tag	AMS.60039	10 µg
PDE4B1, GST-tag	AMS.60041	10 µg
PDE4B2, GST-tag, His-tag	AMS.60042	5 µg
PDE4C1, GST-tag	AMS.60044	5 µg
PDE4D2, GST-tag	AMS.60048	5 µg
PDE4D3, GST-tag	AMS.60046	5 µg
PDE4D7, GST-tag	AMS.60047	5 µg
PDE5A1, GST-tag	AMS.60050	10 µg
PDE6C, GST-tag 6	AMS.0062	5 µg
PDE6C, GST-Tag (Mouse)	AMS.60065	5 µg
PDE7A, GST-tag	AMS.60070	10 µg
PDE7B, GST-tag, His-tag	AMS.60071	10 µg
PDE8A1, GST-tag	AMS.60080	10 µg
PDE9A2, GST-tag	AMS.60090	10 µg
Rat PDE10A, GST-tag	AMS.60102	5 µg
RAT PDE1B, His-GST-tags	AMS.60009	10 µg
Rat PDE2A, His-GST-tags	AMS.60022	5 µg
Rat PDE4B, GST-tag	AMS.60049	5 µg

Enzymes continued

Enzymes	Cat. No.	Size
Rat PDE4D, GST-tag	AMS.60054	5 µg
Rat PDE7A, GST-tag	AMS.60074	10 µg
Rat PDE7B, GST-tag	AMS.60075	10 µg
TDP2, His-GST-tags	AMS.60702	20 µg

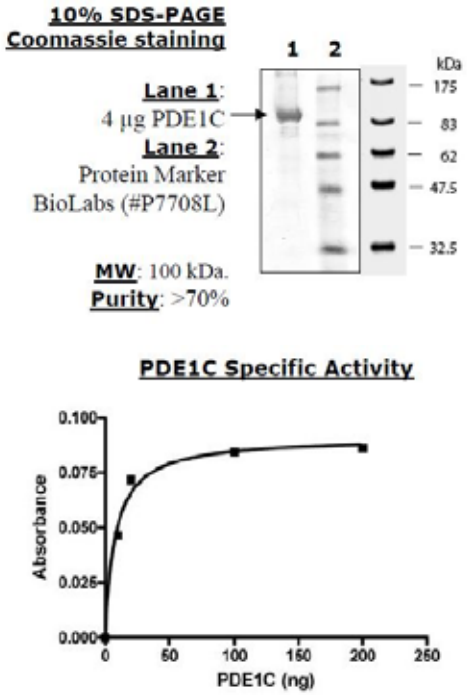


Figure 60. *Measurement of PDE1C activity (Cat. #AMS.60012).*

Substrates

Substrates	Cat. No.	Size
FAM-cAMP	AMS.60200	100 nmol
FAM-cGMP	AMS.60201	100 nmol

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
Aminophylline	AMS.27731	25 mg
Anagrelide HCl	AMS.27732-1	10 mg
Anagrelide HCl	AMS.27732-2	50 mg
Apremilast (CC-10004)	AMS.27735-2	25 mg
Apremilast (CC-10004)	AMS.27735-1	5 mg
BAY-60-7550	AMS.27215	5 mg
Cilomilast	AMS.27742-1	5 mg
Cilomilast	AMS.27742-2	10 mg
Cilomilast	AMS.27742-3	50 mg
Cilostazol	AMS.27743-1	25 mg
Cilostazol	AMS.27743-2	100 mg
CP 80633	AMS.27301	10 mg
Dyphylline	AMS.27747	50 mg
GSK256066	AMS.27751-1	10 mg
GSK256066	AMS.27751-2	50 mg
IBMX	AMS.27213	50 mg
Icariin	AMS.27217	1 g
Irsogladine	AMS.27754	50 mg
LY171883	AMS.27211	10 mg
Milrinone	AMS.27216	10 mg
Milrinone	AMS.27309	100 mg
Milrinone	AMS.27308	50 mg
Papaverine	AMS.27304	1 g
Papaverine	AMS.27302	250 mg
PF-2545920	AMS.27637-1	5 mg
PF-2545920	AMS.27637-2	10 mg
Pimobendan	AMS.27638-2	50 mg
Pimobendan	AMS.27638-1	10 mg
Quercetin	AMS.27214	5 g
Roflumilast	AMS.27645-1	10 mg
Roflumilast	AMS.27645-2	25 mg
Roflumilast	AMS.27645-3	50 mg
Rolipram	AMS.27005	10 mg
S- (+)-Rolipram	AMS.27648-1	10 mg
S- (+)-Rolipram	AMS.27648-2	25 mg
S- (+)-Rolipram	AMS.27648-3	50 mg
Sildenafil Citrate	AMS.27105	25 mg
SP600125	AMS.27023	50 mg
Tadalafil	AMS.27657-2	100 mg
Tadalafil	AMS.27657-3	500 mg
Tadalafil	AMS.27657-1	50 mg
Vardenafil HCl Trihydrate	AMS.27776-1	100 mg
Vardenafil HCl Trihydrate	AMS.27776-2	10 mg
Vinpocetine	AMS.27778-1	100 mg
Vinpocetine	AMS.27778-2	200 mg
Zaprinast	AMS.27218	10 mg

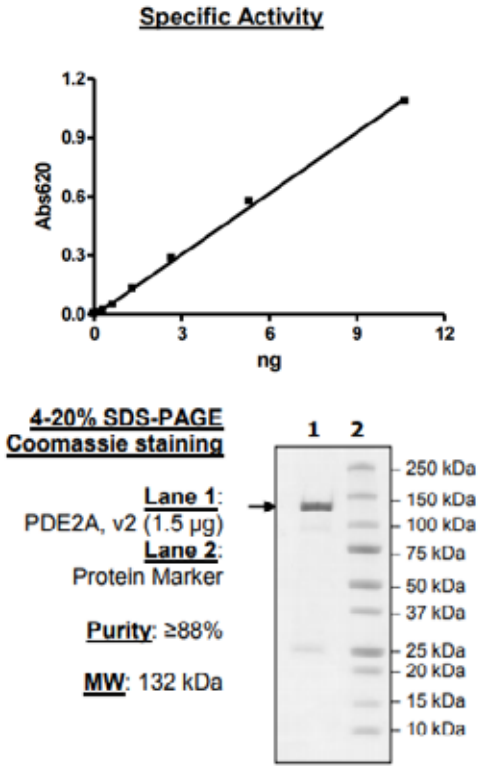


Figure 61. *PDE2A V2 (Mouse) quality assurance Cat. #AMS.60018*

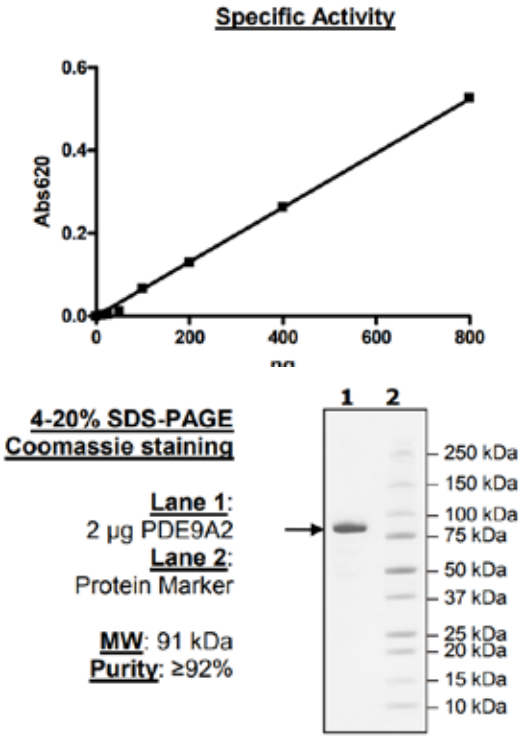


Figure 62. *PDE9A, isoform b quality assurance Cat. #AMS.60090*

PROTEIN ARGININE DEIMINASE

The post-translational modification of histones has significant effects on overall chromatin function. One such modification is citrullination or arginine de-imination, which is catalyzed by the protein arginine deiminases (PADs), a unique family of enzymes that catalyzes the hydrolysis or peptidyl-arginine to form peptidyl-citrulline on histones, fibrinogen, and other biologically relevant proteins.

Overexpression and/or increased PAD activity is observed in several diseases, including rheumatoid arthritis, Alzheimer's disease multiple sclerosis, lupus, Parkinson's disease, and cancer.

Assay Kits

Assay Kits	Cat. No.	Size
PADI1	AMS.50151	10 µg
PADI2, FLAG-tag	AMS.50152	10 µg
PADI3, FLAG-tag 5	AMS.50153	10 µg
PADI4, FLAG-tag	AMS.50154	10 µg

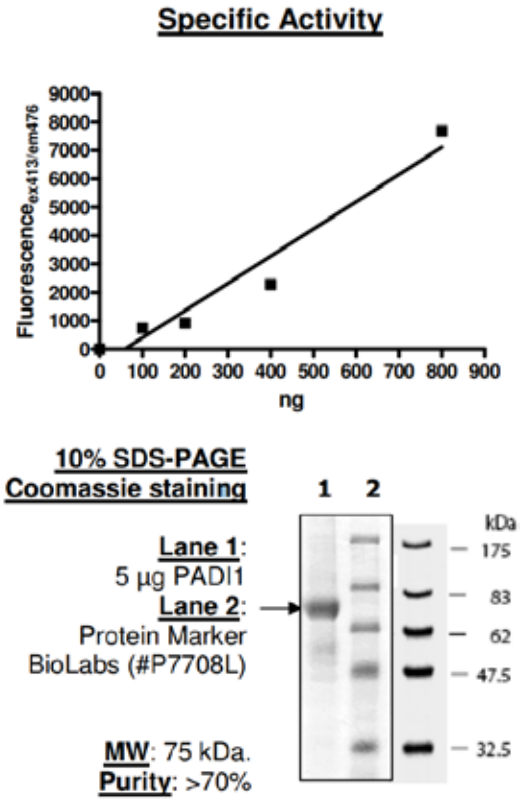


Figure 63. *PADI1 quality assurance Cat. #AMS.50151*

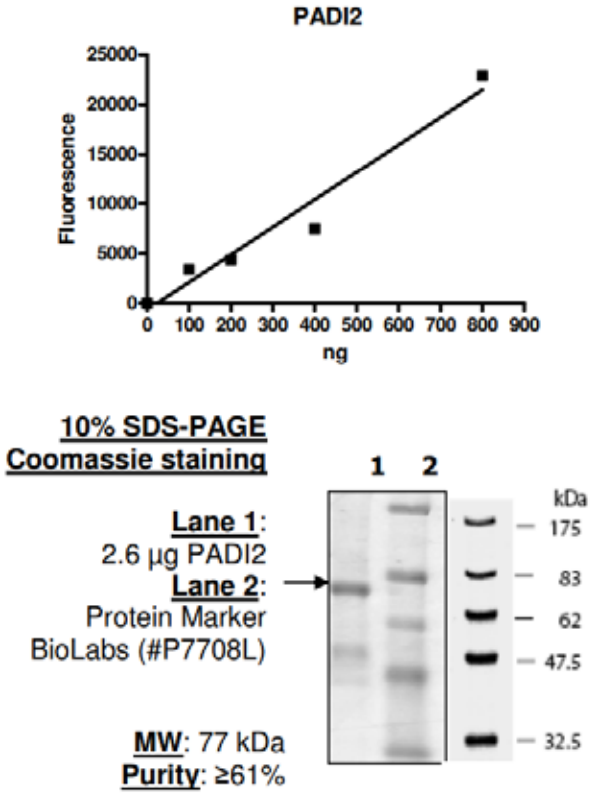


Figure 64. *PADI2 quality assurance Cat. #AMS.50152*

CELL SURFACE RECEPTORS

Cell surface receptors, often called transmembrane receptors, are important proteins that mediate communication between the cell and the outside world. Extracellular ligands (cytokines, growth factors, hormones, neurotransmitters, or cell recognition molecules) bind to the receptor, triggering conformational changes that initiate intracellular signaling pathways (signal transduction). Cell surface receptors regulate a multitude of biological pathways required for cell growth, differentiation, proliferation, and survival.

Antibodies

Antibodies	Cat. No.	Size
Anti-CD20 Antibody	AMS.71209	100 µg
Anti-CTLA4 Neutralizing Antibody	AMS.71212	100 µg
Anti-PCSK9 Neutralizing Antibody	AMS.71207	50 µg
Anti-PCSK9 Neutralizing Antibody, Biotin-labeled	AMS.71216	50 µg
Anti-PD-1 (S228P) Antibody	AMS.71326	100 µg
Anti-PD-1 Neutralizing Antibody	AMS.71120	100 µg
Anti-PD-1 Neutralizing Antibody, Biotin-labeled	AMS.71215	100 µg
Anti-PD-L1 (CD274) Neutralizing Antibody	AMS.71213	100 µg
Anti-PD-L1 Neutralizing Antibody, Biotin-labeled	AMS.71214	100 µg
Anti-β-Amyloid, Plaque Neutralizing Antibody	AMS.71223	100 µg

GPCR

GPCR	Cat. No.	Size
Frizzled-1, Fc fusion	AMS.71123	50 µg
Frizzled-10, Fc fusion	AMS.71124	50 µg
Frizzled-4, Fc fusion	AMS.71126	50 µg

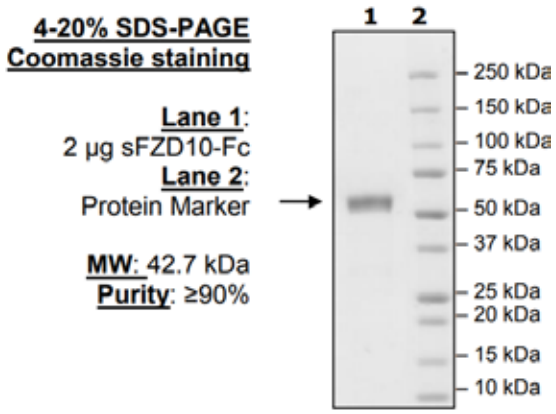


Figure 65. *Frizzled-10 quality assurance Cat. #AMS.71124*

Assay Kits

Assay Kits	Cat. No.	Size
BTLA:HVEM[Biotinylated] Inhibitor Screening Assay Kit	AMS.72008	96 rxns
CD137[Biotinylated]:CD137L Inhibitor Screening Assay Kit	AMS.72025	96 rxns
CD226:CD112 Homogeneous Assay Kit	AMS. 72051	384 rxns
CD226:CD155 Homogeneous Assay Kit	AMS.72052	384 rxns
CD28:B7-1[Biotinylated] Inhibitor Screening Assay Kit	AMS.72007	96 rxns
CD28:B7-2[Biotinylated] Inhibitor Screening Assay Kit	AMS.72062	96 rxns
CD47:SIRP-γ[Biotinylated] Inhibitor Screening Assay Kit	AMS.72059	96 rxns
CTLA4:B7-1 TR-FRET Assay Kit	AMS.72120	384 rxns
CTLA4:B7-1[Biotinylated] Inhibitor Screening Assay Kit	AMS.72009	96 rxns
CTLA4[Biotinylated]:B7-2 Inhibitor Screening Assay Kit	AMS.72024	96 rxns
GITRL:GITR[Biotinylated] Inhibitor Screening Assay Kit	AMS.72061	96 rxns
IL-17RA[Biotin]:IL-17A Inhibitor Screening Assay Kit	AMS.72060	96 rxns
Mouse PD-1[Biotinylated]:PD-L1 Inhibitor Screening Assay Kit	AMS.72027	96 rxns
PCSK9(D374T)-LDLR TR-FRET Assay Kit	AMS.72011	384 rxns
PCSK9-LDLR TR-FRET Assay Kit	AMS.72010	384 rxns
PCSK9[Biotinylated]-LDLR Binding Assay Kit	AMS.72002	96 rxns
PD-1:PD-L1 Homogeneous Assay Kit	AMS.72014	384 rxns
PD-1:PD-L1[Biotinylated] Inhibitor Screening Assay Kit	AMS.72003	96 rxns
PD-1:PD-L1[Biotinylated] Inhibitor Screening Colorimetric Assay Kit	AMS.72016	96 rxns
PD-1:PD-L2 TR-FRET Assay Kit	AMS.72012	384 rxns
PD-1:PD-L2[Biotinylated] Inhibitor Screening Assay Kit	AMS.72004	96 rxns
PD-1:PD-L2[Biotinylated] Inhibitor Screening Colorimetric Assay Kit	AMS.72017	96 rxns
PD-1[Biotinylated]:PD-L1 Inhibitor Screening Assay Kit	AMS.72005	96 rxns
PD-1[Biotinylated]:PD-L1 Inhibitor Screening Colorimetric Assay Kit	AMS.72018	96 rxns
PD-1[Biotinylated]:PD-L2 Inhibitor Screening Assay Kit	AMS.72006	96 rxns
PD-1[Biotinylated]:PD-L2 Inhibitor Screening Colorimetric Assay Kit	AMS.72019	96 rxns
TIGIT:CD112 Homogeneous Assay Kit	AMS.72030	384 rxns
TIGIT:CD155 Homogeneous Assay Kit	AMS. 72029	384 rxns

Soluble Receptors

Soluble Receptors	Cat. No.	Size
B7-1 (CD80), Fc fusion (Human) HiP™	AMS.71125	100 µg
B7-1 (CD80), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71114	50 µg
B7-2 (CD86), Fc fusion (Human)	AMS.71150	100 µg
B7-H4, His-tag (Human)	AMS.71144	100 µg
B7-H4, His-tag, Biotin-labeled (Human) HiP™	AMS.71129	50 µg
B7-H5 (VISTA), Fc fusion (Human) HiP™	AMS.71148	100 µg
B7-H5 Fc fusion, Avi-Tag, Biotin-labeled (Human)	AMS.71327	50 µg
BTLA(CD272), Fc fusion (Human)	AMS.71141	100 µg
CD112, Fc-Fusion, Avi-Tag, Biotin-labeled (Human)	AMS.72231	50 µg
CD112, His-tag, Biotin-labeled (Human) HiP™	AMS.71234	50 µg
CD137 (4-1BB), Fc fusion (Human) HiP™	AMS.71170	100 µg
CD137 (4-1BB), Fc Fusion, Biotin-labeled (Human) HiP™	AMS.71171	50 µg
CD137, Fc fusion (mIgG2a), Avi-tag (Mouse) HiP™	AMS.71254	100 µg
CD137, Fc fusion (mIgG2a), Biotin-labeled (Mouse) HiP™	AMS.71254	50 µg
CD137L (4-1BB ligand), His-tag	AMS.71189	100 µg
CD155 (PVR), His-tag (Human)	AMS.71181	100 µg
CD160, His-tag (Human) HiP™	AMS.71173	100 µg
CD160, His-tag, Biotin-labeled (Human) HiP™	AMS.71135	50 µg
CD2, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71270	50 µg
CD226, Fc fusion (Human) HiP™	AMS.71252	100 µg
CD226, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71253	50 µg
CD244, Fc Fusion (IgG1), Avi-Tag (Human)	AMS.72305	100 µg
CD27, Fc fusion (Human)	AMS.71176	100 µg
CD28, Fc fusion (Human)	AMS.71113	200 µg
CD40, Fc fusion (Human)	AMS.71174	100 µg
CD44, Fc fusion (Human)	AMS.71187	100 µg
CD44, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71133	50 µg
CD46-BC, His-tag (Human)	AMS.71230	100 µg
CD46-BC, His-tag (Monkey)	AMS.71232	100 µg
CD46-C, His-tag (Human)	AMS.71231	100 µg
CD46-C, His-tag (Monkey)	AMS.71233	100 µg
CD47, Fc fusion (Human) HiP™	AMS.71177	100 µg
CD47, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71169	50 µg
CD47, Fc-Fusion, Streptavidin-Labeled (Human) HiP™	AMS.71292	100 µg
CD47, His-tag (Human)	AMS.71127	100 µg
CD48, Fc fusion (IgG1), Avi-Tag™ HiP™ (Human)	AMS.72309	100 µg
CD70, His-tag (Human)	AMS.71178	100 µg
CTLA4 (CD152), Fc fusion (Human)	AMS.71149	100 µg
CTLA4 (CD152), Fc fusion, Biotin-labeled (Human)	AMS.71152	50 µg
Frizzled-1, Fc fusion	AMS.71123	50 µg
Frizzled-10, Fc fusion	AMS.71124	50 µg
Frizzled-4, Fc fusion	AMS.71126	50 µg
Frizzled-7, Fc Fusion	AMS.71139	50 µg
GITR (CD357), Fc fusion (Human) HiP™	AMS.71172	100 µg
GITR (CD357), Fc Fusion, Biotin-labeled (Human)	AMS.71256	50 ug

Soluble Receptors continued

Soluble Receptors	Cat. No.	Size
GPC3, His-tag [Monkey (M. fascicularis)]	AMS.71260	100 ug
Human LTBR, Fc fusion HiP™	AMS.71112	100 µg
HVEM, Fc fusion (Human)	AMS.71142	100 µg
HVEM, Fc fusion, Biotin-labeled (Human)	AMS.71143	50 µg
ICOS (CD278), Fc fusion (Human)	AMS.71179	100 µg
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-1	5 µg
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-2	25 µg
KIR2DL3, Fc fusion, Biotin-labeled (Human)	AMS.71298	50 µg
LAG3 (CD223) (Mouse), Fc(Human) Avi-Tag, Biotin HiP™	AMS.79003	50 µg
LAG3 (CD223), Biotin-labeled (Human) HiP™	AMS.71147	50 µg
LAG3 (CD223), Fc fusion (Human)	AMS.71146	100 µg
LAG3, His-Tag, HiP™	AMS.71229	100 µg
LDLR, Biotin-labeled	AMS.71206	20 µg
LDLR, FLAG-Avi-Tag (Mouse)	AMS.71222	50 µg
LDLR, FLAG-tag	AMS.71205	50 µg
Mouse LTBR, Fc fusion HiP™	AMS.71122	100 µg
OX40 (CD134), Biotin-labeled, His-tag (Human) HiP™	AMS.71310	50 µg
OX40 (CD134), Fc fusion (Human)	AMS.71175	100 µg
OX40L (CD252), His-tag (Human)	AMS.71185	100 µg
PCSK9(D374T), Biotin-labeled	AMS.71211	20 µg
PCSK9, C-terminal Avi-His, Biotin-labeled	AMS.71305	20 µg
PCSK9, C-terminal His-Avi, Biotin-labeled	AMS.71304	20 µg
PCSK9, His-Avi-Tag (Mouse)	AMS.71221-2	50 µg
PCSK9, His-Avi-Tag (Mouse)	AMS.71221-1	20 µg
PCSK9, His-Avi-Tag (Rat)	AMS.71220-1	20 µg
PCSK9, His-Avi-Tag (Rat)	AMS.71220-2	50 µg
PCSK9, His-tag	AMS.71204-2	50 µg
PCSK9, His-tag	AMS.71204-1	20 µg
PD-1 (CD279), Fc fusion (Human)	AMS.71106	100 µg
PD-1 (CD279), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71109	50 µg
PD-1 (CD279), FLAG-tag (Human) HiP™	AMS.71115	50 µg
PD-1 (E136A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71247	50 µg
PD-1 (L128A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71248	50 µg
PD-1 (Monkey), Fc fusion (Human IgG1), Biotin-labeled HiP™	AMS.71235	50 µg
PD-1 (Mouse), Fc fusion (Human), PE-labeled	AMS.71267	50 µg
PD-1 (P130A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71246	50 µg
PD-1, FLAG-Avi-His-tag (Human) HiP™	AMS.71198	50 µg
PD-L1 (CD274), Fc fusion (Human) HiP™	AMS.71104-1	50 µg
PD-L1 (CD274), Fc fusion (Human) HiP™	AMS.71104-2	100 µg
PD-L1 (CD274), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71105	50 µg
PD-L1 (CD274), FLAG-tag (Human) HiP™	AMS.71183	50 µg
PD-L1 (Human), Fc fusion (Mouse IgG2a) HiP™	AMS.71999	100 µg

Soluble Receptors continued

Soluble Receptors	Cat. No.	Size
PD-L1, Fc fusion, PE-labeled (Mouse)	AMS.71268	50 µg
PD-L2 (CD273), Fc fusion (Human) HiP™	AMS.71107	100 µg
PD-L2 (CD273), Fc fusion, Biotin-labeled (Human)	AMS.71108	50 µg
RANK, Fc fusion (IgG1), Avi-tag (Human)	AMS.70823	100 µg
SIRP-ɣ (CD172g), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71236	50 µg
SIRP-α (CD172a), His-tag (Human)	AMS.71145	100 µg
SIRP-α (SIRP alpha), His-tag, Biotin-labeled (Human) HiP™	AMS.71138	50 µg
TIGIT, Fc fusion (Human)	AMS.71186	100 µg
TIM-3, Fc fusion (Human)	AMS.71151	100 µg
TIM-3, FLAG-tag (Human)	AMS.71180	100 µg

Ion Channel

Ion Channel	Cat. No.	Size
CFTR – HEK 293 Recombinant Cell Line	AMS.60506	2 vials
IKCA1 (KCNN4) - HEK293 Recombinant Cell Line	AMS.90330	2 vials
NaV1.7–HEK293 Recombinant Cell Line	AMS.60507	2 vials
TMEM16A-HEK293 Recombinant Cell Line	AMS.90230	2 vials
TRPC3-HEK293 Recombinant Cell Line	AMS.90130	2 vials
TRPC7-HEK293 Recombinant Cell Line	AMS.90030	2 vials
TRPM2-HEK293 Recombinant Cell Line	AMS.90331	2 vials

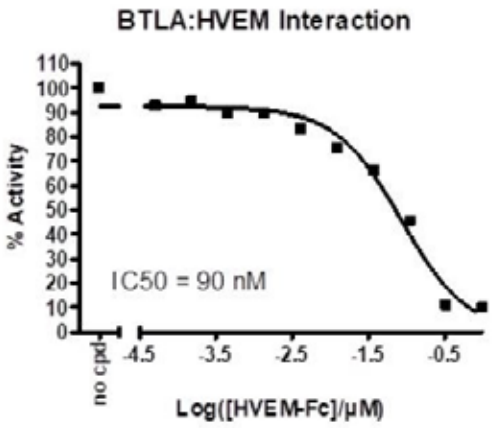


Figure 66. *Inhibition of BTLA:HVEM interaction by unlabeled HVEM Cat. #AMS.72008*

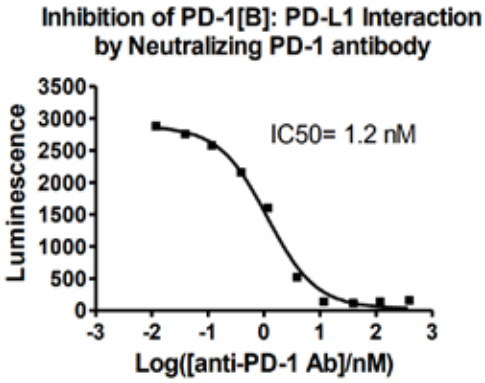


Figure 67. *Inhibition of PD-1-PD-L1 binding by PD-1 Neutralizing Antibody (Cat. #AMS.71120). Luminescence was measured using a Bio-Tek fluorescent microplate reader*

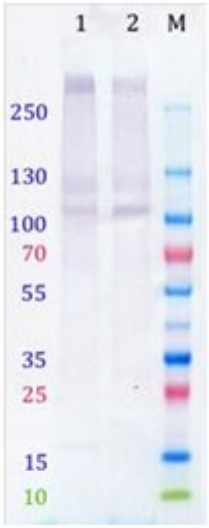


Figure 68. *Figure 1. Western Blot of the NaV1.7 expressing cells. Western Blot of HEK293 NaV1.7 cells (lanes 1, 2) stained with anti-Sodium channel Nav1.7, clone N68/6 (Millipore, Cat. #MABN41).*

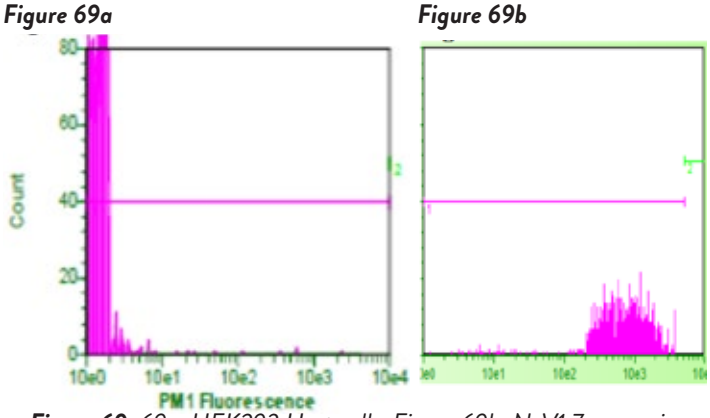


Figure 69. *69a: HEK293 Host cells, Figure 69b: NaV1.7 expressing HEK293 cells (#AMS.60507) stained with anti-NaV 1.7 clone 68/6 monoclonal antibody and PE-labeled anti-mouse.*

HEAT SHOCK PROTEIN

Heat shock proteins are present in cells under normal conditions, but are expressed at much higher levels under conditions of stress, such as pH change, oxygen deprivation, and heat. They function as molecular chaperones by stabilizing denatured proteins that have become misfolded or unfolded as a result of cellular stress and by aiding in their re-folding. Left uncorrected, these misfolded proteins can form aggregates that eventually can kill the cell.

Assay Kits

Assay Kits	Cat. No.	Size
HSP90α (C-Terminal) Inhibitor Screening Assay Kit	AMS.50317	384 rxns
HSP90α (N-terminal) Assay Kit	AMS.50298	384 rxns
HSP90α N-Terminal Domain Assay Kit	AMS.50293	96 rxns
HSP90β N-Terminal Domain Assay Kit	AMS.50294	96 rxns
3x HSP90 Assay Buffer 2	AMS.50324	10 mL
5x HSP90 Assay Buffer 1	AMS.50311	20 ml
HSP90α (C-Terminal Domain) TR-FRET Kit	AMS.50261	384 rxns
HSP90α C-Terminal Domain TR-FRET Assay Kit	AMS.50289	96 rxns
HSP90β (C-Terminal Domain) TR-FRET Kit	AMS.50262	384 rxns
HSP90β (C-terminal) Inhibitor Screening Kit	AMS.50314	384 rxns
HSP90β (N-terminal) Assay Kit	AMS.50299	384 rxns

Proteins

Proteins	Cat. No.	Size
Hop/STIP1, FLAG-tag	AMS.50322	100 µg
HSP40, His-tag	AMS.50285	100 µg
HSP70 (Q435A), His-tag	AMS.50288	100 µg
HSP70, His-tag	AMS.50287	200 µg
HSP90α (C-terminal), Biotin-labeled, His-tag, Avi-tag	AMS.50316	100 µg
HSP90α, His-tag	AMS.50290	200 µg
HSP90β (C-terminal), Biotin-labeled, His-tag, Avi-tag	AMS.50313	100 µg
HSP90β, His-tag	AMS.50292	200 µg

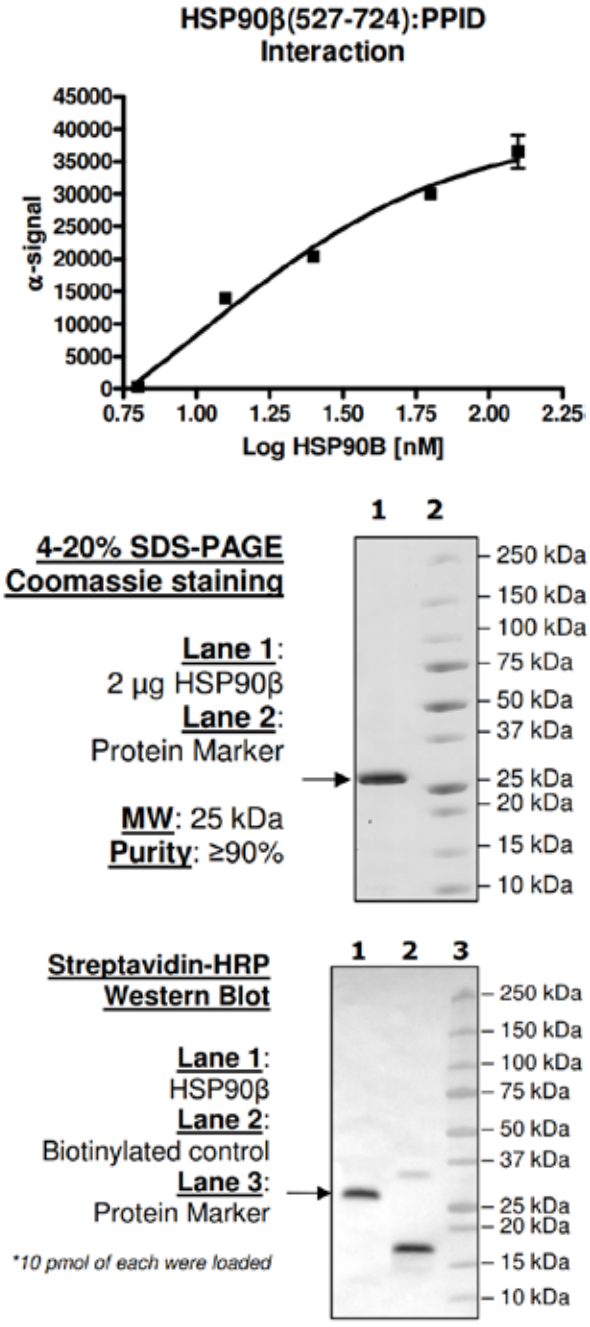
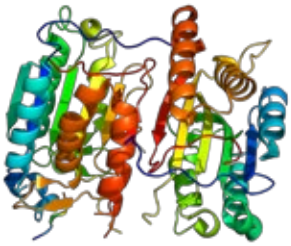


Figure 70. *HSP90β quality assurance Cat. #AMS.50313*

APOPTOSIS



Apoptosis is the process of programmed cell death. During apoptosis, a cell initiates intracellular signaling in response to a strong stress or other cue. Death via apoptosis is characterized by many phenotypic changes in a cell, including cell shrinking, nuclear and chromosomal fragmentation, and PARP cleavage. Apoptosis is critical for proper embryonic development, immune system function, and hormone-dependent atrophy.

Many of the most widely used cancer therapeutics activate apoptotic machinery to kill cancer cells. Alternately, inhibitors of apoptosis may also have therapeutic value in preventing unregulated apoptosis in HIV or neurodegenerative diseases (Alzheimer's, Parkinson's, Huntington's).

Assay Kits

Assay Kits	Cat. No.	Size
BCL-2 TR-FRET Assay Kit	AMS.50222	384 rxns
BCL-XL TR-FRET Assay Kit	AMS.50223	384 rxns
Caspase-3 Homogeneous Assay Kit	AMS.80700	96 rxns
Caspase-6 Homogeneous Assay Kit	AMS.80703	96 rxns
Caspase-7 Homogeneous Assay Kit	AMS.80701	96 rxns
Caspase-8 Homogeneous Assay Kit	AMS.80704	96 rxns

Proteins

Proteins	Cat. No.	Size
BCL-2, His-tag	AMS.50272	100 µg
BCL-XL, His-tag	AMS.50273	100 µg
Caspase3, His-tag	AMS.80500	50 µg
Caspase6, His-tag	AMS.80113	50 µg
Caspase7, His-tag	AMS.70000	50 µg
Caspase8, His-tag	AMS.80114	50 µg
Caspase9, His-tag	AMS.80115	50 µg
NALP3 (CIAS1), His-FLAG-tags	AMS.80117	5 µg
STAT3, GST-tag	AMS.75003	20 µg
WDR5, His-Tag, Biotin-Labeled	AMS.80016	50 µg
XIAP (Bir2,Bir3), His-tag	AMS.75002	50 µg
XIAP (Bir3), His-tag	AMS.75001	50 µg
XIAP, FLAG-tag	AMS.80401	20 µg

Inhibitors / Activators

Inhibitors/Activators	Cat. No.	Size
2-Methoxyestradiol (2-MeOE2)	AMS.27762-1	5 mg
2-Methoxyestradiol (2-MeOE2)	AMS.27762-2	100 mg
2-Methoxyestradiol (2-MeOE2)	AMS.27762-3	300 mg
Ac-DEVD-CMK	AMS.27315	5 mg
Apoptosis Activator 2	AMS.27733-1	25 mg
Apoptosis Activator 2	AMS.27733-2	50 mg
Apoptosis Activator 2	AMS.27733-3	100 mg
Apoptosis Inhibitor	AMS.27734-1	10 mg
Apoptosis Inhibitor	AMS.27734-2	25 mg
Apoptosis Inhibitor	AMS.27734-3	100 mg
BAM7	AMS.27607-1	10 mg
BAM7	AMS.27607-2	50 mg
Bendamustine HCl	AMS.27738-2	10 mg
Bendamustine HCl	AMS.27738-1	5 mg
Betulinic acid	AMS.27739-1	25 mg
Betulinic acid	AMS.27739-2	50 mg
Betulinic acid	AMS.27739-3	100 mg
BIBR 1532	AMS.27740-1	25 mg
BIBR 1532	AMS.27740-2	100 mg
Boc-D-FMK	AMS.27611-2	10 mg
Boc-D-FMK	AMS.27611-3	25 mg
Boc-D-FMK	AMS.27611-1	5 mg
Caspase-3/7 Inhibitor I	AMS.27741-3	25 mg
Caspase-3/7 Inhibitor I	AMS.27741-1	5 mg
Caspase-3/7 Inhibitor I	AMS.27741-2	10 mg
CAY10625	AMS.27321	10 mg
Cisplatin	AMS.27744	5 mg
Costunolide	AMS.27745-1	5 mg
Costunolide	AMS.27745-2	10 mg
Cycloheximide	AMS.27746	1 mg
Elesclomol (STA-4783)	AMS.27748-2	10 mg
Elesclomol (STA-4783)	AMS.27748-1	5 mg
Embelin	AMS.27322	100 mg
Mitomycin C	AMS.27763	10 mg
Oxyresveratrol	AMS.27318	500 mg
PCI 34051	AMS.27316	50 mg
PCI 34051	AMS.27317	100 mg
Q-VD(OMe)-OPh	AMS.27640-3	25 mg
Q-VD(OMe)-OPh	AMS.27640-1	5 mg
Q-VD(OMe)-OPh	AMS.27640-2	10 mg
Q-VD-OPh hydrate	AMS.27641-1	5 mg
Q-VD-OPh hydrate	AMS.27641-2	10 mg
Q-VD-OPh hydrate	AMS.27641-3	25 mg
Sepantronium Bromide	AMS.27045	5 mg
SGI-1776 free base	AMS.27651-1	5 mg
SGI-1776 free base	AMS.27651-2	10 mg
SGI-1776 free base	AMS.27651-3	50 mg
Streptozocin (U-9889)	AMS.27656-2	500 mg

Inhibitors / Activators continued

Inhibitors/Activators	Cat. No.	Size
Streptozocin (U-9889)	AMS.27656-1	100 mg
Tenovin-1	AMS.27660-1	25 mg
Tenovin-1	AMS.27660-2	50 mg
Tenovin-1	AMS.27660-3	100 mg
Tenovin-6	AMS.27661-1	1 mg
Tenovin-6	AMS.27661-2	5 mg
Tenovin-6	AMS.27661-3	10 mg
Trimidox	AMS.27319	50 mg
Trimidox	AMS.27320	100 mg
TW-37	AMS.27775-1	10 mg
TW-37	AMS.27775-2	50 mg
TW-37	AMS.27775-3	25 mg
VX-765	AMS.27779-2	10 mg
VX-765	AMS.27779-3	50 mg
VX-765	AMS.27779-1	100 mg
Z-DEVD-FMK	AMS.27314	5 mg
Z-DQMD-FMK	AMS.27666-2	10 mg
Z-DQMD-FMK	AMS.27666-3	25 mg
Z-DQMD-FMK	AMS.27666-1	5 mg
Z-FA-FMK	AMS.27667-3	10 mg
Z-FA-FMK	AMS.27667-1	5 mg
Z-FA-FMK	AMS.27667-2	25 mg
Z-VAD(OMe)-FMK	AMS.27313	5 mg
Z-VDVAD-FMK	AMS.27668-1	5 mg
Z-VDVAD-FMK	AMS.27668-2	10 mg
Z-VDVAD-FMK	AMS.27668-3	25 mg
Z-VEID-FMK	AMS.27669-1	5 mg
Z-VEID-FMK	AMS.27669-2	10 mg
Z-VEID-FMK	AMS.27669-3	25 mg
Z-WEHD-FMK	AMS.27672-3	25 mg
Z-WEHD-FMK	AMS.27672-1	5 mg
Z-WEHD-FMK	AMS.27672-2	10 mg

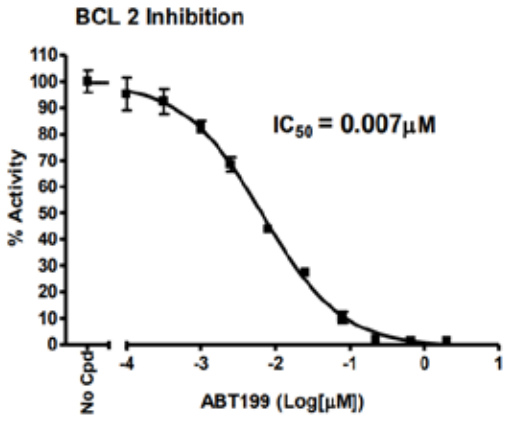


Figure 71. *Inhibition of BCL-2 by ABT 199, measured using the BCL-2 TR-FRET Assay Kit, Cat. #AMS.50222*

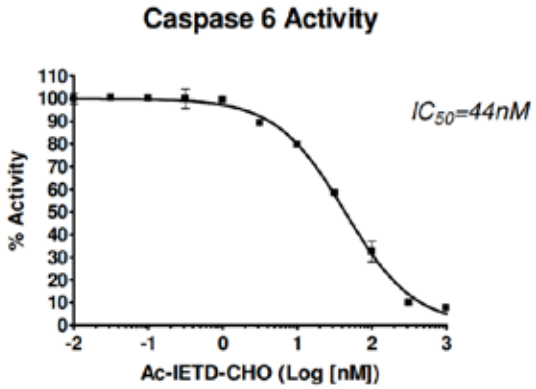


Figure 72. *Inhibition of Caspase-6 enzyme activity using Ac-IETD-CHO, measured using the Homogeneous Caspase-6 Assay Kit, Cat. #AMS.807XX. Fluorescence intensity was measured using a Tecan fluorescent microplate reader*

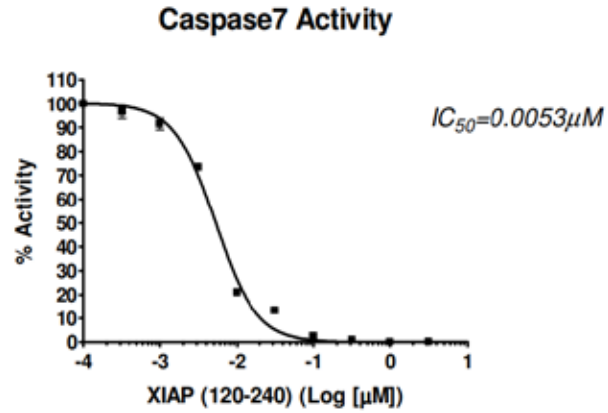


Figure 73. *Inhibition of Caspase-7 enzyme activity using XIAP Bir2 domain Cat. #AMS.80701*

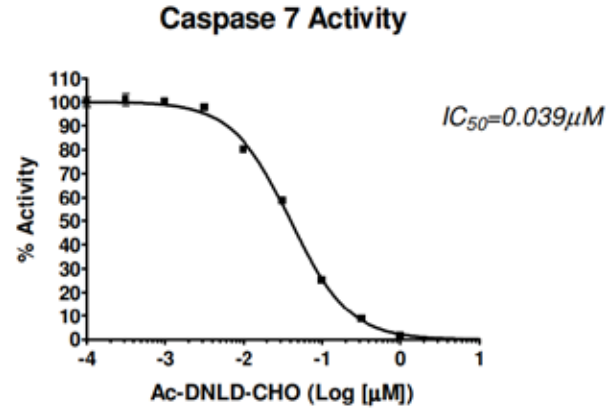


Figure 74. *Ac-DNLD-CHO (right), measured using the Homogeneous Caspase-7 Assay Kit, Cat. #AMS.80701. Fluorescence intensity was measured using a Tecan fluorescent microplate reader*

METABOLIC ENZYMES

Metabolic enzymes carry out a variety of cellular functions necessary for survival and homeostasis, including proteolysis and digestion, cellular respiration, energy storage, transcription, and response to the environment. These life-sustaining pathways are vital for growth and maintenance of cellular integrity. Metabolic enzymes encompass a wide range of different protein classes, including carboxylases, dehydrogenases, lipoxygenases, oxidoreductases, kinases, lyases and transferases.

Metabolic Enzymes

Enzymes	Cat. No.	Size
ACC1, FLAG-His-tags	AMS.50202	10 µg
ACC1, His-tag	AMS.50200	10 µg
ACC2, His-tag	AMS.50201	10 µg
ACC2, His-tag, Strep-tag	AMS.50203	10 µg
Adenosine Deaminase (ADA), His-tag	AMS.70016	100 µg
AHCY, S. solfataricus, His-tag	AMS.70017	50 µg
ALAS2, His-tag	AMS.50270	100 µg
ALOX15, FLAG-tag	AMS.50220	20 µg
Alvespimycin HCl (17-DMAG)	AMS.27730-1	25 mg
Alvespimycin HCl (17-DMAG)	AMS.27730-2	100 mg
ARG1, His-Tag	AMS.71658	50 µg
ARG2, His-Tag	AMS.71659	50 µg
ATP Citrate Lyase, GST-tag	AMS.50255	10 µg
Carbonic Anhydrase 1 (CA1), His-tag	AMS.71093	100 µg
Carbonic Anhydrase 2 (CA2), His-tag	AMS.71094	100 µg
Carbonic Anhydrase 9 (CA9), His-tag	AMS.71101	100 µg
COX1, FLAG-His-tags	AMS.71110	100 µg
COX2, FLAG-His-tags	AMS.71111	100 µg
Donepezil HCl	AMS.27619-1	1 g
Donepezil HCl	AMS.27619-2	5 g
Ezetimibe	AMS.27749-2	50 mg
Ezetimibe	AMS.27749-3	100 mg
Ezetimibe	AMS 27749-1	25 mg
FDH, P. putida, His-tag	AMS.71076	100 µg
Fucokinase, FLAG-tag	AMS.71077	10 µg
Galactokinase, His-tag	AMS.50275	200 µg
GLS1, His-tag	AMS.71102	20 µg
GLS2, His-tag	AMS.71242	20 µg
GPD1, His-tag	AMS.71092	50 µg
HEXA, FLAG-His-tags	AMS.71087	100 µg
HEXB, FLAG-His-tags	AMS.71088	100 µg
Human AHCY, GST-tag	AMS.50260	50 µg
Human PKM2, His-tag	AMS.50295	20 µg
IDE, His-tag	AMS.70002	20 µg
IDH1 (R132H), FLAG-tag	AMS.71099-2	100 µg
IDH1 (R132H), FLAG-tag	AMS.71099-1	50 µg
IDH1, FLAG-tag	AMS.71075-1	50 µg
IDH1, FLAG-tag	AMS.71075-2	100 µg
IDH2 (R140Q), FLAG-tag	AMS.71100-2	100 µg
IDH2 (R140Q), FLAG-tag	AMS.71100-1	50 µg
IDH2, FLAG-tag	AMS.71074-2	100 µg
IDH2, FLAG-tag	AMS.71074-1	50 µg
IDO1, His-tag (Human)	AMS.71182	50 µg
IDO2, His-tag (Human)	AMS.71194-2	100 µg
LDHA, His-tag	AMS.71081	100 µg
LDHB, His-tag	AMS.71078	100 µg
LTA4H, FLAG-His-tags	AMS.70001	20 µg
Lysyl Oxidase-like 2 (LOXL2), FLAG-tag (Sf9-derived)	AMS.60502	10 µg
Lysyl Oxidase-like 2 (LOXL2), His-tag (HEK293-derived)	AMS.60512	10 µg
Lysyl oxidase-like 4 (LOXL4), His-tag (E. coli-derived)	AMS.60524	20 µg
MAOA, His-tag, FLAG-tag	AMS.71103	20 µg
MAT2A Inhibitor Screening Assay Kit	AMS.71402	384 rxns
MAT2A, His-Tag	AMS.71401	100 µg
MGLL, His-tag, GST-tag	AMS.71096	50 µg
Mouse PKM2, His-tag	AMS.50296	20 µg
MTAP, GST-tag	AMS.50305	50 µg
NAMPT (PBEF1)	AMS.71098	50 µg
NAMPT (PBEF1), GST-tag	AMS.91004	50 µg
NAMPT Inhibitor Screening Assay Kit	AMS.71276	96 rxns
ND-630	AMS.27071-2	5 mg
ND-630	AMS.27071-1	1 mg
NMNAT1, His-tag	AMS.71090	100 µg
NOS2, His-FLAG-tags	AMS.70015	10 µg
NOS3, His-FLAG-tag	AMS.70018	10 µg
PDHK1, GST-tag	AMS.40084	70018
Peroxiredoxin I (K197Q), His-tag	AMS.70020	100 µg
Peroxiredoxin I (K197R), His-tag	AMS.70021	100 µg
Peroxiredoxin I, His-tag	AMS.70010	100 µg
Peroxiredoxin II, His-tag	AMS.70011	100 µg
PFKFB3, His-tag	AMS.71089	50 µg
PFKFB4, His-tag	AMS.71199	50 µg
PHGDH, His-tag	AMS.71079	100 µg
PKLR Var1 (PKR), His-tag	AMS.40500	20 µg
PKLR Var2 (PKL), His-tag	AMS.40501	20 µg
PKM1, His-tag	AMS.40502	20 µg
PPID (CYP-40), GST-tag	AMS.71095	100 µg
PSAT1, GST-tag	AMS.71085	100 µg

Metabolic Enzymes continued

Enzymes	Cat. No.	Size
Sphingosine-1-phosphate lyase1, His-tag	AMS.50300	10 µg
T4 β-glucosyltransferase, His-tag	AMS.72000-2	100 µg
T4 β-glucosyltransferase, His-tag	AMS.72000-1	20 µg
TDO, His-tag (Human)	AMS.71195	50 µg
TPH1, His-tag (Human)	AMS.71192	50 µg
TPH2, His-tag (Human)	AMS.71193	50 µg
VER 155008	AMS.27777-1	10 mg
VER 155008	AMS.27777-2	50 mg
XL-888	AMS.27781-1	10 mg
XL-888	AMS.27781-2	5 mg
XL-888	AMS.27781-3	25 mg

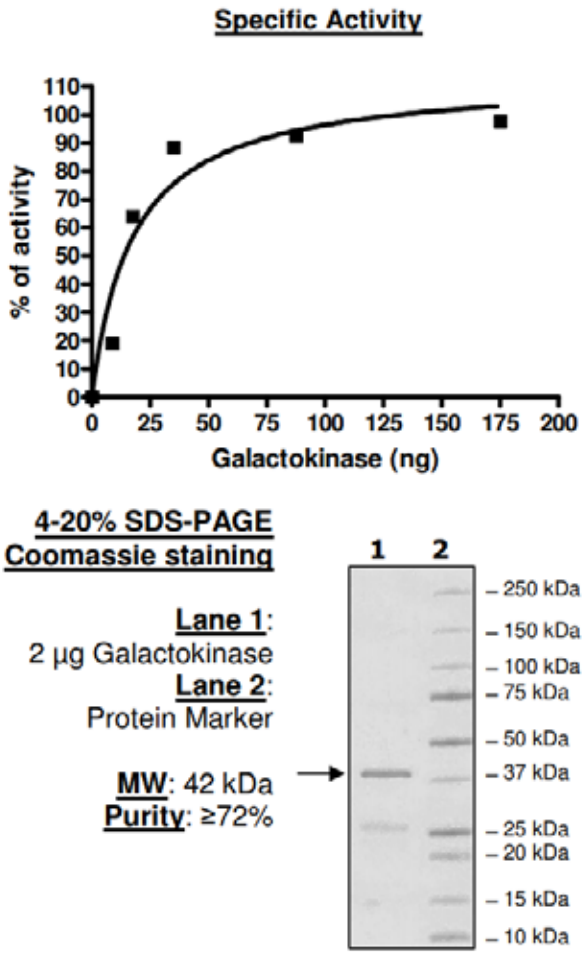


Figure 75. *Galactokinase quality assurance Cat. #AMS.50275*

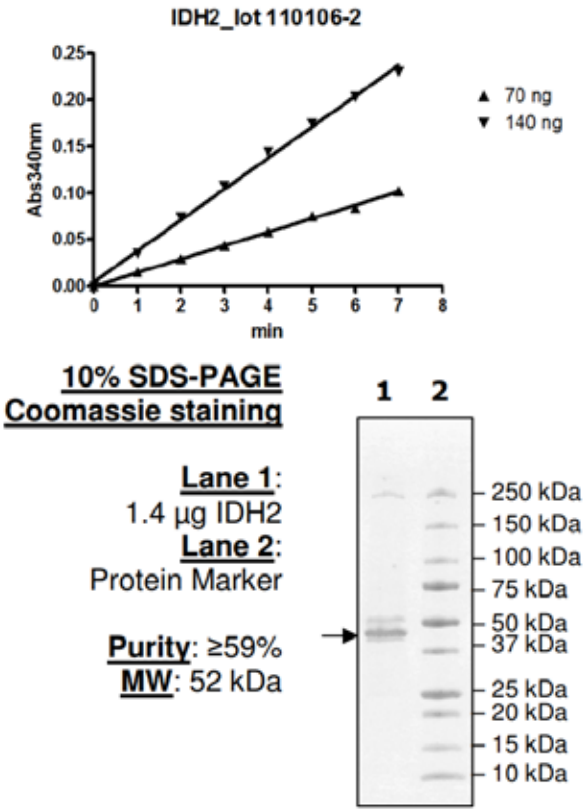


Figure 76. *IDH2 quality assurance Cat. #AMS.71074*

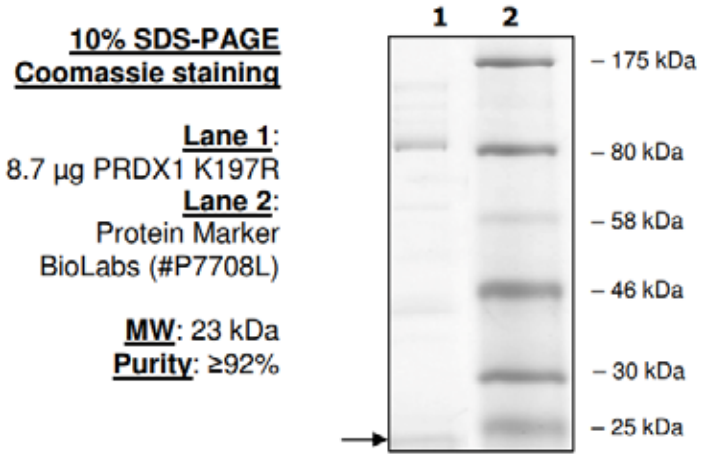
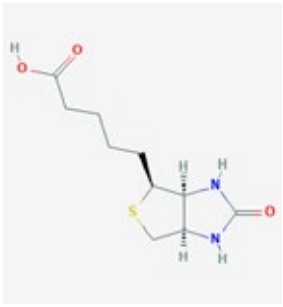


Figure 77. *Peroxiredoxin I (K197R) quality assurance Cat. #AMS.70021*



Biotinylation, Biotin-labeling is commonly used for non-radioactive labeling and purification of proteins and other target molecules. Biotin labeling takes advantage of the exceptionally strong interaction between biotin (vitamin H) and either avidin or streptavidin. The affinity of biotin to avidin or streptavidin is one of the strongest known non-covalent interactions of a protein and ligand, exhibiting a dissociation constant (Kd) around 10-15. Furthermore, this interaction is resistant to high or low pH, high salt concentrations, temperature extremes, and denaturants. These properties of the biotin-avidin interaction make it useful for purifying and/or detecting proteins of interest. AMSBIO has a number of proteins that have been biotin-labeled via chemical methods through various reaction groups as well as enzymatically using AviTag™ technology.

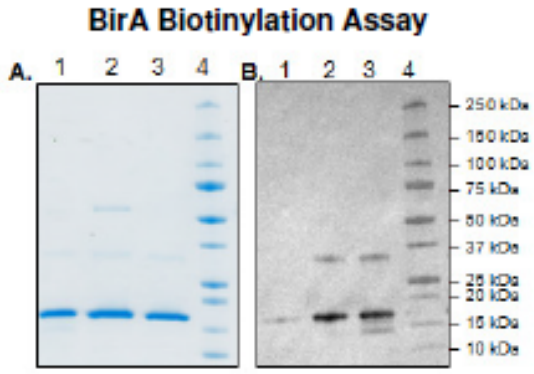


Figure 78. *BRD4-Avi biotin-labeling with GST-BirA. A. Coomassie blue stained gel showing (1) unbiotinylated BRD4-Avi, (2) GST-BirA/BRD4-Avi, (3) BRD4-Avi-biotin control and (4) protein markers. B. The corresponding Western blot probed with Streptavidin-HRP.*

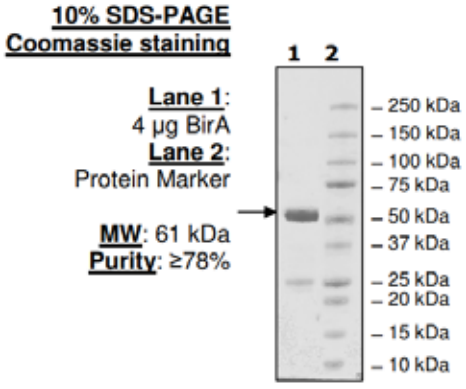


Figure 79. *BirA quality assurance Cat. #AMS.70031*

PEG Products

PEG	Cat. No.	Size
Biotin-PEG11-Amine	AMS.27415	500 mg
Biotin-PEG11-Amine	AMS.27414	100 mg
Biotin-PEG11-Azide	AMS.27436	100 mg
Biotin-PEG11-Azide	AMS.27437	250 mg
Biotin-PEG11-Maleimide	AMS.27452	100 mg
Biotin-PEG11-Maleimide	AMS.27451	50 mg
Biotin-PEG12-Acid	AMS.27429	100 mg
Biotin-PEG12-Acid	AMS.27430	500 mg
Biotin-PEG12-NHS Ester	AMS.27446	500 mg
Biotin-PEG12-NHS Ester	AMS.27445	50 mg
Biotin-PEG2-Acid	AMS.27419	100 mg
Biotin-PEG2-Acid	AMS.27420	250 mg
Biotin-PEG2-Amine	AMS.27407	100 mg
Biotin-PEG2-Amine	AMS.27409	500 mg
Biotin-PEG2-Amine	AMS.27408	250 mg
Biotin-PEG3-Acid	AMS.27423	500 mg
Biotin-PEG3-Acid	AMS.27422	250 mg
Biotin-PEG3-Acid	AMS.27421	100 mg
Biotin-PEG3-Amine	AMS.27411	500 mg
Biotin-PEG3-Amine	AMS.27410	100 mg
Biotin-PEG3-Azide	AMS.27431	100 mg
Biotin-PEG3-Azide	AMS.27432	250 mg
Biotin-PEG3-Azide	AMS.27433	500 mg
Biotin-PEG3-Hydrazide	AMS.27438	50 mg
Biotin-PEG3-Hydrazide	AMS.27439	100 mg
Biotin-PEG3-NHS ester	AMS.27440	50 mg
Biotin-PEG3-NHS ester	AMS.27441	500 mg
Biotin-PEG4-Acid	AMS.27425	250 mg
Biotin-PEG4-Acid	AMS.27424	100 mg
Biotin-PEG4-Alcohol	AMS.27418	500 mg
Biotin-PEG4-Alcohol	AMS.27417	250 mg
Biotin-PEG4-Alcohol	AMS.27416	100 mg
Biotin-PEG4-NHS ester	AMS.27442	50 mg
Biotin-PEG4-NHS ester	AMS.27443	100 mg
Biotin-PEG4-PFP ester	AMS.27444	500 mg
Biotin-PEG4-PFP ester	AMS.27450	250 mg
Biotin-PEG4-PFP ester	AMS.27449	100 mg
Biotin-PEG6-Acid	AMS.27426	50 mg
Biotin-PEG6-Acid	AMS.27427	100 mg
Biotin-PEG6-Acid	AMS.27428	500 mg
Biotin-PEG7-Amine	AMS.27413	500 mg
Biotin-PEG7-Amine	AMS.27412	100 mg
Biotin-PFP ester	AMS.27447	100 mg
Biotin-PFP ester	AMS.27448	1 g

BirA Proteins

BirA Proteins	Cat. No.	Size
BirA, GST-tag	AMS. 70031	100
BirA, His-FLAG-tags (E. coli-derived)	AMS.70030	100
BirA, His-FLAG-tags (Sf9-derived)	AMS.70032	50
BirA-transformed Competent E. coli cells	AMS.2762	10

Other Biotinylated Proteins

Other Proteins	Cat. No.	Size
TNKS1 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80579	384 rxns
TNKS1 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80573	96 rxns
TNKS2 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80578	96 rxns
TNKS2 Histone Ribosylation Assay Kit (Biotin-labeled NAD+)	AMS.80572	384 rxns
Histone H2a, Full Length, Biotin-labeled, His-tag	AMS.52036	0.5 mg
Histone H2a, Full Length, Biotin-labeled, His-tag	AMS.52049	50 µg
Histone H3 peptide (1-21), Biotin-labeled	AMS.52011	80 nmole
Histone H3 peptide (1-21), Dimethyl K9, Biotin-labeled	AMS.50351	500 µl
Histone H3 peptide (1-21), Monomethyl K9, Biotin-labeled	AMS.50353	500 µl
Histone H3 peptide (1-21), Trimethyl K9, Biotin-labeled	AMS.50350	500 µl
Histone H3 peptide (21-44), Biotin-labeled	AMS.52017	80 nmole
Histone H3 Peptide (21-44), Mono K27, Biotin-labeled	AMS.52020	40 nmole
Histone H3, Full Length, Biotin-labeled, His-tag	AMS.52053	50 µg
Histone H3, Full Length, Biotin-labeled, His-tag	AMS.52047	0.5 mg
Histone H4 peptide (1-21), Biotin-labeled	AMS.52018	80 nmole
Histone H4 peptide (1-21), Dimethyl R3, Biotin-labeled	AMS.51200	500 µl
Histone Octamer, Biotin-labeled, His-tag	AMS.52061	50 µg
HSP90α (C-terminal), Biotin-labeled, His-tag, Avi-tag	AMS.50316	100 µg
HSP90β (C-terminal), Biotin-labeled, His-tag, Avi-tag	AMS.50313	100 µg
IP6K2, Biotin-labeled, His-tag, Avi-tag	AMS.40643	10 µg
LDLR, Biotin-labeled	AMS.71206	20 µg
NAD+, Biotin-Labeled	AMS.80610	500 µl
PCSK9(D374T), Biotin-labeled	AMS.71211	20 µg
PCSK9, C-terminal Avi-His, Biotin-labeled	AMS.71305	20 µg
PCSK9, C-terminal His-Avi, Biotin-labeled	AMS.71304	20 µg
PCSK9[Biotinylated]-LDLR Binding Assay Kit	AMS.72002	96 rxns
PRMT4 peptide substrate, Biotin-labeled	AMS.50352	80 nmole
Recombinant Nucleosome (E. coli-derived), Biotin-labeled, His-tag	AMS.52048	20 µg
Zebov GP1,2, Biotin-labeled	AMS.21004	50 µg

Biotinylated Immunotherapy Proteins

Immunotherapy Proteins	Cat. No.	Size
Anti-PD-1 Neutralizing Antibody, Biotin-labeled	AMS.71215	100 µg
Anti-PD-L1 Neutralizing Antibody, Biotin-labeled	AMS.71214	100 µg
B7-1 (CD80), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71114	50 µg
B7-2 (CD86), Fc fusion, Biotin labeled (Human) HiP™	AMS.71159	50 µg
B7-H4, His-tag, Biotin-labeled (Human) HiP™	AMS.71129	50 µg
B7-H5 Fc fusion, Avi-Tag, Biotin-labeled (Human)	AMS.71327	50 µg
CBL-B (Y363F), His-tag, Biotin-labeled (Human)	AMS.80413	50 µg
CBL-B, His-tag, Biotin-labeled (Human)	AMS.80412	50 µg
CD112, Fc-Fusion, Avi-Tag, Biotin-labeled (Human)	AMS.72231	50 µg
CD112, His-tag, Biotin-labeled (Human) HiP™	AMS.71234	50 µg
CD137 (4-1BB), Fc Fusion, Biotin-labeled (Human) HiP™	AMS.71171	50 µg
CD137, Fc fusion (mIgG2a), Biotin-labeled (Mouse) HiP™	AMS.71255	50 µg
CD150, Fc Fusion (IgG1), Biotin Labeled (Human)	AMS.72307	50 µg
CD150, Fc Fusion, Avi-Tag (Human)	AMS.72304	100 µg
CD155, His-tag, Biotin-labeled (Mouse) HiP™	AMS.71168	50 µg
CD160, His-tag, Biotin-labeled (Human) HiP™	AMS.71135	50 µg
CD2, Fc fusion, Avi-Tag, (Human) HiP™	AMS.71264	100 µg
CD2, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71270	50 µg
CD226, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71253	50 µg
CD244, Fc Fusion (IgG1), Biotin-Labeled (Human)	AMS.72306	50 µg
CD28H, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71239	50 µg
CD44, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71133	50 µg
CD47, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71169	50 µg
CD48, Fc Fusion (IgG1), Biotin-Labeled (Human)HiP™	AMS.72308	50 µg
CEACAM, Avi-His-Tag	AMS.70206	100 µg
CEACAM, Avi-His-Tag, Biotin Labeled	AMS.70201	50 µg
CTLA4 (CD152), Fc fusion, Biotin-labeled (Human)	AMS.71152	50 µg
GITR (CD357), Fc Fusion, Biotin-labeled (Human)	AMS.71256	50 µg
HVEM, Fc fusion, Biotin-labeled (Human)	AMS.71143	50 µg
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-1	5 µg
IL-17RA, Fc fusion, Biotin-labeled (Human)	AMS.91013-2	25 µg
KIR2DL1 Fc-fusion, Biotin-labeled HiP™	AMS.71296	50 µg
KIR2DL2 Fc-fusion, Biotin-labeled HiP™	AMS.71297	50 µg
KIR2DL3, Fc fusion, Biotin-labeled (Human)	AMS.71298	50 µg
LAG3 (CD223) (Mouse), Fc(Human) Avi-Tag, Biotin HiP™	AMS.79003	50 µg
LAG3 (CD223), Biotin-labeled (Human) HiP™	AMS.71147	50 µg
OX40 (CD134), Biotin-labeled, His-tag (Human) HiP™	AMS.71310	50 µg
PD-1 (CD279), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71109	50 µg
PD-1 (CD279), Fc fusion, Biotin-labeled (Mouse) HiP™	AMS.71118	50 µg
PD-1 (E136A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71247	50 µg
PD-1 (I126A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71238	50 µg
PD-1 (I134A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71245	50 µg
PD-1 (K78A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71244	50 µg

Biotinylated Immunotherapy Proteins continued

Immunotherapy Proteins	Cat. No.	Size
PD-1 (L128A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71248	50 µg
PD-1 (Monkey), Fc fusion (Human IgG1), Biotin-labeled HiP™	AMS.71235	50 µg
PD-1 (P130A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71246	50 µg
PD-1, FLAG-His-tag, Biotin-labeled (Human) HiP™	AMS.71325	50 µg
PD-L1 (A121Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71320	50 µg
PD-L1 (CD274), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71105	50 µg
PD-L1 (CD274), Fc fusion, Biotin-labeled (Mouse) HiP™	AMS.71119	50 µg
PD-L1 (D122A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71321	50 µg
PD-L1 (D26A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71313	50 µg
PD-L1 (F19A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71311	50 µg
PD-L1 (I54A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71314	50 µg
PD-L1 (K124A), Fc fusion, Avi-Tag (Human) HiP™	AMS.71993	100 µg
PD-L1 (K124A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71323	50 µg
PD-L1 (M115A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71318	50 µg
PD-L1 (Monkey), Fc fusion (Human IgG1), Biotin-labeled HiP™	AMS.71154	50 µg
PD-L1 (Q66A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71316	50 µg
PD-L1 (R113A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71317	50 µg
PD-L1 (R125A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71326	50 µg
PD-L1 (S117Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71319	50 µg
PD-L1 (T20Q), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71312	50 µg
PD-L1 (Y123A), Fc fusion, Avi-Tag (Human)	AMS.71992	100 µg
PD-L1 (Y123A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71322	50 µg
PD-L1 (Y56A), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71315	50 µg
PD-L2 (CD273), Fc fusion, Biotin-labeled (Human)	AMS.71108	50 µg
RANK, Fc fusion (IgG1), Biotin Labeled (Human)	AMS.70822	50 µg
SIRP-ɣ (CD172g), Fc fusion, Biotin-labeled (Human) HiP™	AMS.71236	50 µg
SIRP-α (SIRP alpha), His-tag, Biotin-labeled (Human) HiP™	AMS.71138	50 µg
TIGIT, Fc fusion, Biotin-labeled (Human) HiP™	AMS.71251	50 µg
TIM-3, Biotin-labeled, His-tag (Human) HiP™	AMS.71237	50 µg
TUT4, FLAG-tag, Biotin-Labeled (Human)	AMS.71258	25 µg

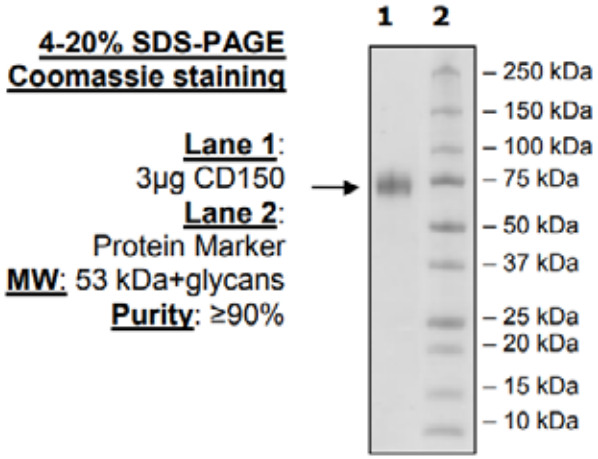


Figure 80. *CD150 quality assurance Cat. #AMS.72307*

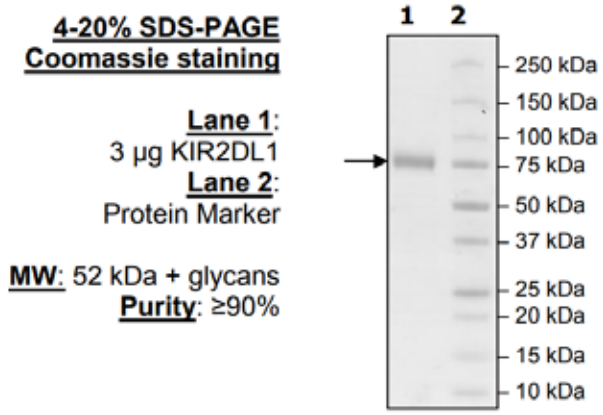


Figure 81. *KIR2DL1 Fc-fusion, Biotin-labeled quality assurance Cat. #AMS.71296*

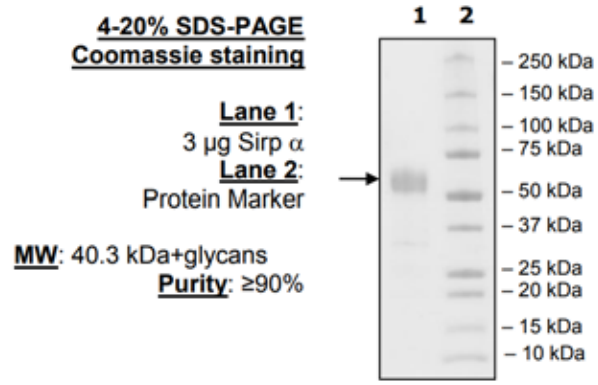


Figure 82. *SIRP-α (CD172a), Biotin-Labeled quality assurance Cat. #AMS.71138*

SCREENING AND PROFILING CUSTOM SERVICES

Evaluate lead compounds with our biochemical and cell-based screening services. Save time by letting us screen your compounds of interest against our unique assay panels or determine IC50 values with our portfolio of >200 assays so you can focus on advancing your drug discovery program.

Our biochemical-based screening services provide excellent tools to quickly identify potential therapeutics, predict potency, and narrow down a large pool of candidates to a much smaller one. However, these assays are not done in the context of live cells, and in the case of the immune checkpoint binding assays, they do not give any information on the functional result of the therapeutic intervention.

The cell-based screening service offers a more comprehensive view of the biological context and the resulting cellular responses, allowing for more informed decisions to be made about which compounds advance and which need to be cut out.

Screening Scientific Categories

- Acetyltransferase
- Apoptosis
- Bromodomain
- Cell Signaling Pathway
- Cell Surface Receptor
- Cholesterol
- Demethylase
- HDAC/Sirtuin
- HSP90
- Immunotherapy
- Kinase
- Luciferase Reporter
- Metabolic Enzymes
- Methyl-lysine Reader
- Methyltransferase
- PARP
- PARP Trap
- Phosphodiesterases
- Protease
- Protein Tyrosine Phosphatase
- Pyruvate Kinase
- Tumor Cell Proliferation
- Ubiquitination

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