MERCK MILLIPORE

New PRODUCTS

Antibodies
Small Molecule Inhibitors

Epigenetics & Gene Regulation | **Signaling** | Neuroscience | Cancer | Cell Structure | Immunology

Merck Millipore—with the expertise of Calbiochem®, Chemicon®, and Upstate®

VOLUME 4

Mods – modifications – small alterations can have a big impact on form and function.

It's true in motorsports...and in biology. Study your protein mods with high performance antibodies.

In the motorsports world, stock vehicles are modified to enhance their performance. Modifications, or mods, to the engine, drive train, intake and exhaust components add up to provide phenomenal performance gains that can be measured as horsepower and torque increases, which yield a competitive advantage, and result in reduced run times.

In biology, proteins undergo modifications that alter their function. Some proteins require the modifications in order to perform their function effectively, whether it's a pro-protein that is cleaved to produce an active enzyme, or a protein that is phosphorylated to facilitate a signaling process. Other proteins, such as histones, undergo modifications that regulate gene expression and alter cellular function. There are several post translational modifications such as acetylation, methylation, phosphorylation, and ubiquitination that impact protein function and activity. As a result, the analysis of proteins and their post-translational modifications are particularly important for the study of normal and disease-associated processes. New antibodies to **detect phospho Histidines** are now available from Merck Millipore.
Look inside for details.

Merck Millipore offers a broad portfolio of specific antibodies that are validated to detect your favorite mod'd proteins – it's like turbo boost for your signaling research.

A Look Inside...

Merck Millipore is a business of MERCK

NEW Introducing the First Isoform Specific Anti-phospho Histidine Antibodies

The role of phosphorylation in signaling is well established. While amino acids such as histidine are known to be phosphorylated, signaling research has focused more on amino acids such as tyrosine, serine and threonine. Despite a growing body of evidence suggesting potential roles for histidine phosphorylation in cellular function and disease development, the lack of commercially available phospho-histidine antibodies has been an obstacle—until now.

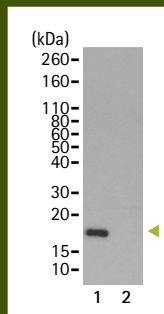
Recently, Dr. Tony Hunter and his team at the Salk Institute for Biological Studies published a report in the journal Cell* describing the generation of antibodies to both the N1 (1-pHis) and N3 (3-pHis) phosphoisomers of histidine. Merck Millipore has licensed these antibodies and is making them available for your research needs.

Choose from four different monoclonal antibodies specific to either N1- or N3-Phosphohistidine.

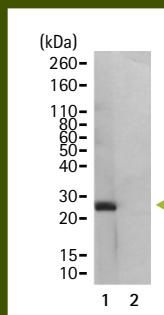
Key Features

- Modification and isomer specific (1-pHis or 3-pHis)
- Sequence-independent monoclonal antibodies against phosphohistidine (pHis)
- Do not cross react with phosphorylated tyrosine
- Useful for immunoblotting, immunofluorescence, and immunoaffinity purification
- Proven performance in recent publication in the journal Cell*

*Fuhs SR, et al. (2015) Monoclonal 1- and 3-Phosphohistidine Antibodies: New Tools to Study Histidine Phosphorylation, Cell 162, 198–210.



Samples containing recombinant human NME1 (NM23-H1) were probed with Anti-N1-Phosphohistidine (1-pHis), clone SC50-3 (Cat. No. MABS1341). Arrow indicates 1-pHis phosphorylated NME1 (~18 kDa) in Lane 1, which contains sample that was not heat inactivated. 1-pHis was not observed in sample with prior heat inactivation (Lane 2).



Samples containing recombinant human phosphoglycerate mutase (PGAM) were probed with Anti-N3-Phosphohistidine (3-pHis), clone SC39-6 (Cat. No. MABS1351). Arrow indicates 3-pHis phosphorylated PGAM (~25 kDa) in Lane 1, which contains sample that was not heat inactivated. 3-pHis was not observed in sample with prior heat inactivation (Lane 2).

Description	Cat. No.
Anti-N1-Phosphohistidine (1-pHis), clone SC1-1	MABS1330
Anti-N1-Phosphohistidine (1-pHis), clone SC50-3	MABS1341
Anti-N3-Phosphohistidine (3-pHis) Antibody, clone SC39-6	MABS1351
Anti-N3-Phosphohistidine (3-pHis) Antibody, clone SC56-2	MABS1352

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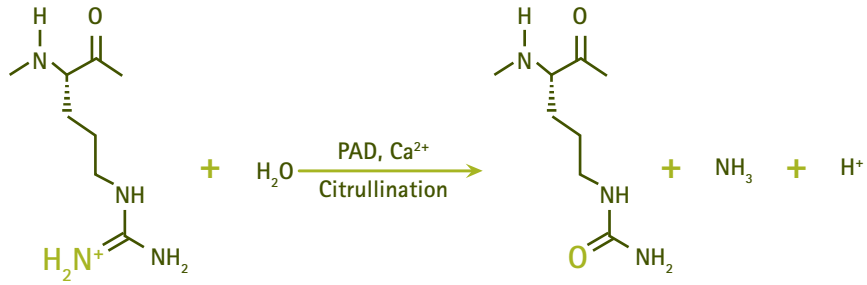
For details, please visit:
www.merckmillipore.com/evaluate

*Shipping and handling not included.

Anti-Citrulline (Modified) Detection Kit

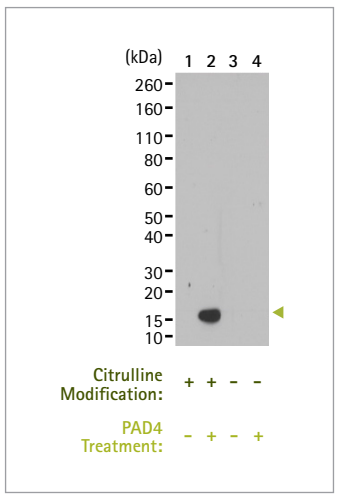
(Catalog Number 17-347B)

Citrullination, or deimination, is the post-translational modification of arginine residues in proteins to citrulline residues. This process is catalyzed by peptidylarginine deiminase (PAD) enzymes. Loss of ionic interactions due to citrullination may destabilize proteins and their interactions. The immune system often attacks citrullinated proteins, leading to autoimmune diseases, such as rheumatoid arthritis and multiple sclerosis. Proteins that normally contain citrulline residues include myelin basic protein (MBP), filaggrin, and several histone proteins. Other proteins (e.g. fibrin and vimentin) are citrullinated during cell-death and tissue inflammation.



Detection of Citrulline residues is a two-step process:

- Modification of citrulline residues is created by a chemical reaction with 2,3-butanedione monoxime and antipyrine in a strong acid solution.
- Detection of proteins with modified citrulline residues uses a standard immunoblot protocol with a human monoclonal antibody against modified citrullines and a goat anti-Human IgG secondary antibody horseradish peroxidase (HRP) conjugate.



This type of citrulline modification ensures the detection of citrulline residues in proteins regardless of neighboring amino acid sequences.

The Anti-Citrulline (Modified) Detection Kit provides key reagents for the modification and detection of citrulline-containing proteins by Western blot (immublot) analysis.

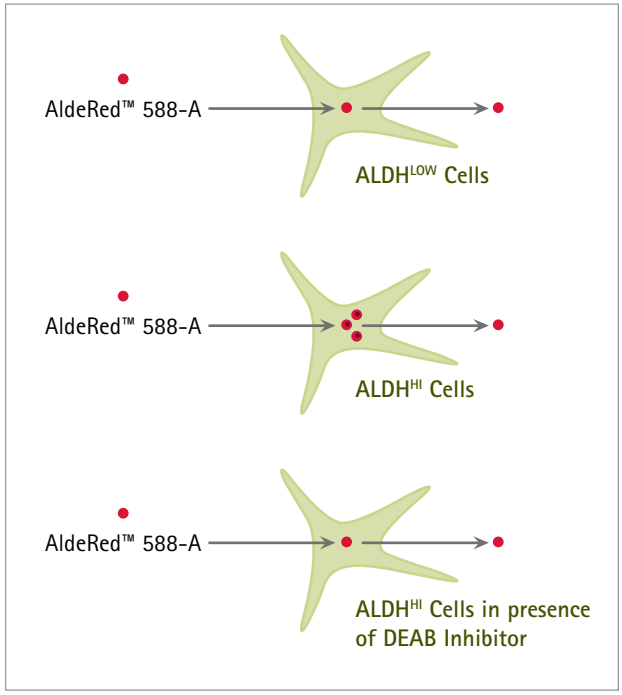
- Each kit contains enough reagents for 10 western blots.
- Certificate of Analysis provides list of necessary components.
- Complete protocol is supplied, and includes reagent preparation, blot preparation, modification of citrulline residues, detection of modified citrulline residues, and preparation of a citrullinated protein control.

AldeRed ALDH Detection Assay

(Catalog Number SCR150)

High aldehyde dehydrogenase (ALDH) activity serves as a universal marker of stem cells, both normal and malignant. Cells can be identified and isolated based upon the enzymatic activity of ALDH, a detoxifying enzyme responsible for oxidation of hazardous aldehyde byproducts. The marker ALDH has been used to isolate cancer stem cells from various human malignancies including bladder, breast, cervical, colon, head and neck, liver, lung, pancreas, prostate and ovary.

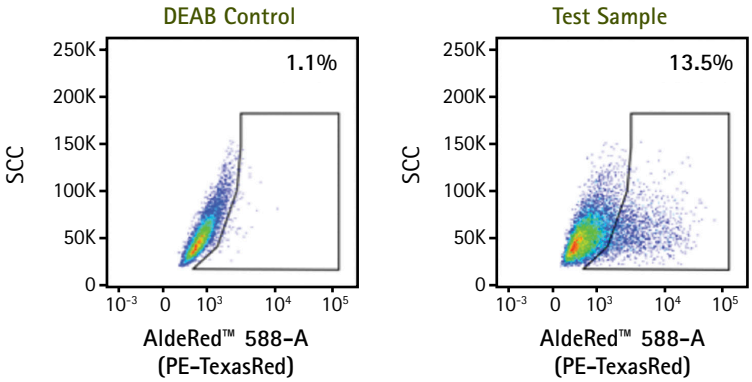
The AldeRed ALDH Detection Kit provides cancer and stem cell scientists with new capabilities for live cell isolation and characterization. The AldeRed reagent is a red-shifted fluorescent substrate for ALDH, allowing cells to be identified and isolated by flow cytometry with concurrent use of green fluorescent cell lines, antibodies, transgenic animals and reporter assays. AldeRed fluoresces red and overcomes the limitation of the ALDEFLUOR™ assay, which measures ALDH levels using a green signal, and cannot be utilized in cells or mice expressing green-fluorescent proteins or other markers emitting in the green fluorescent spectrum.



The AldeRed assay employs a fluorescent and non-toxic ALDH substrate (AldeRed 588-A) that diffuses freely into intact and viable cells, but remains trapped inside the cells once converted by ALDH into the corresponding acid. The amount of fluorescence produced is proportional to the ALDH activity in the cells and is measured by flow cytometry, allowing fluorescence-activated cell sorting (FACS). This kit supplies the ALDH inhibitor diethylaminobenzaldehyde (DEAB), which is used in negative control testing necessary for background fluorescence assessment.

AldeRed Features and Benefits

- Red-shifted assay leaves green channel available for further experimentation
- Live stem cell identification enables flow sorting of rare cell populations
- Rapid enzymatic assay protocol



ALDH activity in head and neck squamous carcinoma cells UM-SCC-47 (Merck Millipore Cat. No. SCC071). AldeRed 588-A reaction was carried according to the standard protocol using 105 cells and a 30-minute incubation time at 37°C. A combination of green laser (532 nm) as the excitation and PE-Texas Red wavelength (615 nm) detector channel was used for the detection of AldeRed 588-A oxidation product.

PUBLICATION HIGHLIGHTS

Anti-phospho-Neph1 (Tyr637/638) rabbit polyclonal antibody
(Cat. No. ABS1509)

Merck Millipore's newly released Anti-phospho-Neph1 (Tyr637/638) rabbit polyclonal antibody (ABS1509) has been published recently in a report describing the role of phosphorylated Neph1 in kidney damage.

In the Arif, et al. paper entitled, Slit diaphragm protein Neph1 and its signaling: a novel therapeutic target for protection of podocytes against glomerular injury*

The U Penn researchers used the Anti-Neph1 antibody to specifically detect Neph1 phosphorylation at tyrosine position 637-638. The researchers demonstrated the ability of Neph1 signaling regulation to preserve glomerular function and revealed a key pathway for therapeutic targeting in kidney damage.

* J. Biol. Chem. (2014) 289(14):9502-9518.

Anti-PTPRT monoclonal antibody
(Cat. No. MABS1158)

Merck Millipore's newly released Anti-PTPRT monoclonal antibody (MABS1158) has been recently published in an important PNAS paper describing the role of PTPR mutations in head and neck cancer.

In the Lui, et al. paper entitled, Frequent mutation of receptor protein tyrosine phosphatases provides a mechanism for STAT3 hyperactivation in head and neck cancer**

The U Pitt School of Medicine researchers used the mouse monoclonal (clone 1F7) in Western blotting to measure PTPRT expression in relation to STAT3 phosphorylation and cell survival. The researchers found that a high mutation rate of PTPRs correlated with head and neck squamous cell carcinomas suggesting that STAT3 pathway inhibitors may be effective therapeutic agents.

**PNAS (2014) 113(3):1114-1119.

Signaling

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-Ubiquitin, Lys48-Specific, clone Apu2, Alexa Fluor® 488 conjugate	Rabbit	Hu, Ms, Rt	IC	05-1307-AF488 (C)
Anti-Anoctamin-5, clone 5F7	Mouse	Ms, Hu	WB	MABS501
Anti-ATP Synthase subunit β, clone 11/21-7-A8	Mouse	Hu, Ms, Rt	WB, IC, ELISA, DB	MABS1304
Anti-Cas9, clone 7A9, HRP conjugate	Mouse	Bacteria	WB	MAC133P
Anti-CBS, clone 9F3.2	Mouse	Hu	WB, IHC(P)	MABS518
Anti-CES2	Rabbit	Hu, Ms, Rt	WB, IHC	ABS1065
Anti-ERLIN-2/SPFH2	Rabbit	Rt, Hu	WB, IC, IP	ABS1610
Anti-Exportin-1/CRM1	Rabbit	Hu, Ms, Mky	WB, IC, IP, EM	ABS1626
Anti-Fibrocystin, clone 18	Mouse	Hu, Rt	IHC(P), IC	MABS1156
Anti-GAPDH (CT), clone RM114	Rabbit	Hu	WB, IC	MABS819
Anti-GAPDH, clone 6C5, Alexa Fluor® 488 conjugate	Mouse	Ms, Hu	IC	MAB374-AF488 (C)
Anti-GAPDH, clone 6C5, Alexa Fluor® 647 conjugate	Mouse	Hu, Ms	IC	MAB374-AF647 (C)
Anti-Glucagon receptor	Rabbit	Hu	WB, IHC(P)	ABS551
Anti-GLUT-1, CT, Alexa Fluor® 488 Conjugate	Rabbit	Hu, Ms, Rt	IC	07-1401-AF488 (C)
Anti-GLUT-1, CT, Alexa Fluor® 647 Conjugate	Rabbit	Hu, Ms, Rt	IC	07-1401-AF647 (C)
Anti-Glutathione S-Transferase A1/A2	Rabbit	Ms	WB	ABS1651
Anti-Hexosaminidase subunit A, clone 13D12.1	Mouse	Hu	WB, IHC(P)	MABS490
Anti-HGPRT, clone 13H11.1	Mouse	Hu	WB	MABS528
Anti-IGF-IRα subunit	Chicken	Hu	WB, IP, IC	06-429-I
Anti-Mitoferrin-1/Mfrn1	Rabbit	Ms	WB	ABS1051
Anti-Nitrotyrosine AlexaFluor® 488 Conjugate	Rabbit	Hu	IC	06-284-AF488 (C)
Anti-Nitrotyrosine AlexaFluor® 647 Conjugate	Rabbit	Hu	IC	06-284-AF647 (C)
Anti-P40, clone 11F12.1, Alexa Fluor® 488	Mouse	Hu, Ms	IC	MABS519-AF488 (C)
Anti-P40, clone 11F12.1, Alexa Fluor® 647	Mouse	Hu, Ms	IC	MABS519-AF647 (C)
Anti-phospho PTEN (Ser385)	Rabbit	Hu	WB, PIA	07-890-I
Anti-phospho-Neph1 (Tyr637/638)	Rabbit	Hu	WB	ABS1509
Anti-PL Scramblase 1, clone 1A8	Mouse	Hu, Ms	WB, IHC, IP	MABS482
Anti-PPIase FKBP4, clone KN382/EC1	Mouse	Hu, Rb	WB, IC, IHC, IP, RIA	MABS1248
Anti-Progesterone Receptor A/B, clone 488/H3	Mouse	Hu	WB, IC	MABS1235
Anti-Progesterone Receptor B, clone 250/H11	Mouse	Hu	WB, IC	MABS1234
Anti-PTPN22, clone 3B3.1	Mouse	Hu	WB	MABS480
Anti-PTPRT, clone 1F7	Mouse	Ms, Rt, Hu	WB	MABS1158
Anti-Rac1, clone 23A8, Alexa Fluor® 488 Conjugate	Mouse	Rt, Hu, Ms	IC	05-389-AF488 (C)
Anti-Rac1, clone 23A8, Alexa Fluor® 647 Conjugate	Mouse	Rt, Hu, Ms	IC	05-389-AF647 (C)
Anti-Ric-8B/Synembryn-B	Rabbit	Ms, Hu, Rb	WB, IP	ABS1614
Anti-Sclerostin, clone 7B6.1	Mouse	Hu, Rt	WB, IHC	MABS445
Anti-Sestrin-2	Rabbit	Hu, Ms	WB	ABS1618

LEGEND
Species: Hu=Human, Ms=Mouse, Rt=Rat, Bov=Bovine, Chk=Chicken, Por=Porcine, Can=Canine, Mky=Monkey, Rb=Rabbit, GP=Guinea Pig
Applications: FC=Flow Cytometry, IC=Immunocytochemistry, IHC=Immunohistochemistry, IHC(P)=Immunohistochemistry (Paraffin), IF=Immunofluorescence, IP=Immunoprecipitation, WB=Western Blotting, Neut=Neutralizing, ChIP=Chromatin Immunoprecipitation, AA=Activity Assay, PIA=Peptide Inhibition Assay, DB=Dot Blot, EM=Electron Microscopy, RIA=Radioimmunoassay, AF=Affects Function, EMSA= Electrophoretic Mobility Shift Assay, EIA=Enzyme Immunoassay, SCC=Stem Cell Culture

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For publications on using these small molecules, visit: www.merckmillipore.com

(C) Conjugated Antibodies

Signaling (continued)

Description	Cat. No.
Proteins & Enzymes	
AKT1 active	14-276-D
AKT1, Inactive	14-279-D
AMPK (A1/B1/G1)	14-840-D
BRAF	14-530M-D
CDK1/CyclinB1	14-450M-D
cRAF (RAF1)	14-352-D
GSK3β	14-306-D
IKKβ	14-485-D
PDK1	14-452-D
PI3 kinase (p110α/p85α)	14-602-D
PI3 kinase (p110δ/p85α)	14-604M-D
PI3 kinase (p120γ)	14-558-D
SRC	14-326-D

Description	Details	Cat. No.
Small Molecules & Inhibitors		
ALDH1A1, A37	A cell permeable, selective, substrate competitive inhibitor of aldehyde dehydrogenase 1A1 (ALDH1A1; K_i = 300 nM; IC_{50} = 4.6 µM) in ovarian cancer spheroids. Does not affect the activity of other related orthologs, including ALDH1A2, ALDH1A3, ALDH2 and ALDH3A1 even at higher concentrations (> 100 µM). Enhances sensitization of IGROV1 ovarian carcinoma cells to cisplatin. Disrupts spheroid formation and reduces viability of ovarian cancer cells.	531726
APT2 Inhibitor, Cpd1	A cell permeable, selective and reversible inhibitor of lysophopholipase 2 (LYPLA2; IC_{50} = 510 nM, K_i = 230 nM). Does not affect the activity of LYPLA1 and 25 other serine hydrolases in mouse BW5147 T cell hydridoma proteome. Shown to cause an almost complete inhibition (+90%) of LYPLA2 activity in lung, heart, and kidney (50 mg/kg, 3 h), and in HEK293T, and mouse T cells (~ 5 µM for 3 h).	531621
Arachidonic Acid, Fungal sp., Sodium Salt	Precursor for prostaglandins, prostacyclin, and thromboxane. Binds to G-protein a-subunits in a covalent, post-translational manner. Inhibits Ras-GAP. Stimulates the synthesis of nitric oxide by platelets. Modulates nitric oxide production by prostaglandin synthesis via the cyclooxygenase pathway.	532830
Aurora A/MYCN Dual Inhibitor, CD532	A cell permeable, highly potent and selective inhibitor of Aurora A (IC_{50} = 48 nM). Acts by binding to the hinge region via a pyrazole moiety and stabilizes a DFG-in, inactive conformation of Aurora A. Potentiates the loss of the wild-type MYCN protein by disrupting MYCN-Aurora A complex and allowing its ubiquitination and proteasomal degradation in MYCN-amplified SK-N-BE (2) and Kelly neuroblastoma cells (EC_{50} = 223 and 146.7 nM, respectively). Causes a loss of S-phase entry of cells and allows their accumulation in both G0/G1 and G2 phases. Shown to be effective *in vivo* with serum t1/2 = 1.5 h in mice.	532605
Dual DYRK/CLK inhibitor, Cpd 23	A cell permeable, dual inhibitor of Cdc2-like kinase 1 (Clk1; IC_{50} = 60 nM) and dual specificity tyrosine phosphorylation-regulated kinases 1A/1B (Dyrk1A/1B; IC_{50} = 200 and 100 nM, respectively). Also inhibits Clk4 with high potency. Exhibits much reduced inhibitory effect on Haspin (IC_{50} = 800 nM) and has much reduced inhibitory effect on other kinases even at higher concentration (~ 5 µM). Causes a complete disappearance of incomplete and alternatively spliced transcripts and is shown to enhance the generation of the mature Clk1 mRNA splicing product (EC_{50} = 8.9 µM) in cells.	532089
GSK-3 Inhibitor XXIX, CHIR98014	A cell-permeable, brain permeant, potent, ATP-competitive and reversible inhibitor of both GSK-3a and b (IC_{50} = 650 and 580 pM, respectively; K_i = 870 pM for Hu GSK-3b). Displays excellent selectivity over closely related Cdc2 and Erk2 (IC_{50} = 3.7 µM & > 10 µM, respectively). Does not affect the activity of several other protein kinases studied. Acutely sensitizes glycogen synthase activity in isolated skeletal muscle from insulin-sensitive lean Zucker and insulin-resistant Zucker diabetic fatty (ZDF) rats and can also augment insulin-stimulated glucose uptake in ZDF rats. However, it does not affect the basal glucose uptake rate.	531167
Perk Inhibitor III, LDN-0070977	A cell-permeable tricyclic heterocycle oxime that acts as a reversible and non ATP-competitive inhibitor of PERK (PKR-like ER kinase, IC_{50} = 7.04 µM) and blocks PERK-dependent phosphorylation of eIF2a. Shown to reduce thapsigargin-induced eIF2a phosphorylation in mouse embryonic fibroblasts over a wide range. Does not exhibit any cellular toxicity up to 50 µM levels.	531294
PLD2 Inhibitor, ML395	A cell permeable, highly potent, selective, and direct allosteric inhibitor of phospholipase D2 (PLD2; IC_{50} = 360 nM in exogenous biochemical assay). Exhibits >80-fold selectivity over phospholipase D1 (PLD1; IC_{50} = 30 µM). Shown to permeate the blood-brain barrier. Protects A549 cells from multiple strains of influenza virus when cells were pre-treated with this compound.	532978

LEGEND

Species: Hu=Human, Ms=Mouse, Rt=Rat, Bov=Bovine, Chk=Chicken, Por=Porcine, Can=Canine, Mky=Monkey, Rb=Rabbit, GP=Guinea Pig

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C Conjugated Antibodies

NEWS!

Merck Millipore Recognized as Top Antibody Supplier Among Researchers

Merck Millipore was recently recognized by CiteAb, the largest citation-ranked antibody search engine- as being among the top antibody providers in terms of quality, reliability, and number of publications. Merck Millipore was chosen for two categories: Researcher's Choice and Antibody Company of the Year.

2014 AWARDS CiteAb The Antibody Search Engine

Nominations for the Researchers' Choice were made by researchers around the world who use antibodies in their work and have personally used the companies or suppliers they nominated. The judging panel for this category was made up of researchers who work at the bench and understand the stresses, strains and rewards of using antibodies. Merck Millipore was mentioned in this category as a result of the reliability of their products. Researchers who nominated Merck Millipore said that its products work really well for multiple applications. Companies in this category were mentioned by researchers as demonstrating a commitment to reliability and customer service among the research antibody sector.

Nominations for the Antibody Company of the Year were based on the company that had the highest number of citations per antibody. CiteAb noted that Merck Millipore offers an extensive, focused portfolio of antibodies and assays, with a large average number of citations.

Merck Millipore provides antibodies with breadth and depth in major research areas including neuroscience, epigenetics, cell signaling, cancer and cell structure. All antibodies are highly validated and the company places great pride in the quality of its products.

Signaling (continued)

Description	Details	Cat. No.
RIP1 Kinase Inhibitor III	A cell-permeable, orally available, potent and reversible inhibitor of receptor interacting protein 1 (RIP1) kinase (IC_{50} = 63 nM and 13 nM in RIP fluorescence polarization and ADP-Glo kinase assays, respectively). Binds to the ATP-binding pocket of RIP1 kinase with enzyme adopting a DLG-out inactive conformation. Shown to be moderately effective in inhibiting 25 other protein kinases in a screening of 300 kinases by radiolabeled assay, but only at high concentrations (~ 1 µM in the presence of 10 mM ATP). Blocks TNFα-induced necrotic cell death (IC_{50} = 250 nM in U937 cells) and protects mice from TNFα-induced hypothermic shock when injected 15 min. prior to i.v. administration of TNFα.	532729
TAZ Activity Modulator, TM-25659	A cell permeable, orally bioavailable imidazol-[4,5-b]pyridine derivative that enhances nuclear localization of transcriptional co-activator with PDZ-binding motif (TAZ) in a dose-dependent manner without affecting the total amount of TAZ in pluripotent C3H10T1/2 cells. Does not affect Ser89 phosphorylation in TAZ, but reduces tyrosine phosphorylation. Reduces PPARg levels in differentiated adipocytes and acts as a suppressor of PPARg-dependent adipocyte differentiation. Also shown to enhance RUNX2-induced osteoblast differentiation of C3H10T1/2 cells and mineralization in a dose-dependent manner. Reduces weight gain in ob/ob mice (50 mg/kg, i.p.) and attenuates bone loss in ovariectomized mice. Displays desirable pharmacokinetic properties with t1/2 = 9.85 h.	530959
Vps34 Inhibitor, VPS34-IN1	A cell-permeable, highly potent, selective, and reversible inhibitor of Vps34 activity (IC_{50} = 25 nM using recombinant Vsp34:Vps15 complex). Displays excellent selectivity over 340 other protein kinases and 25 lipid kinases (even at ~ 1 µM), including class I and class II PI 3-kinases. Does not affect Ser473 or Thr308 phosphorylation status of Akt.	532628

Cancer

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-TRIM3, clone 13D12.1	Mouse	Hu, Rt, Ms	WB, IHC	MABC945
Anti-Calpain, small subunit, clone P-1 (Ascites Free)	Mouse	Hu, Bov, Rt, Can	WB, IHC(P), IC, IP, AA	MAB3083-C
Anti-Caspase 3	Rabbit	Hu, Ms	WB, IC	ABC495
Anti-CD1d, clone WTH-1	Mouse	Rt, Ms	FC, WB, IP, IHC, AA	MABC959
Anti-CD1d, clone WTH-2	Mouse	Rt, Ms	FC, WB, IP, AA	MABC960
Anti-CD1d/KRN7000, clone L363	Mouse	Ms	FC, IP, IC, IHC, ELISA	MABC948
Anti-c-Ret, clone 6F3.1	Mouse	Rt	WB	MABC572
Anti-Cullin-4A/CUL4A, clone 2A2.1	Mouse	Hu	WB	MABC554
Anti-PLA2R, clone 5F5.1	Mouse	Hu	WB, IHC	MABC942
Anti-Pro-Atrial Natriuretic Peptide, clone 11E3.9	Mouse	Rt, Hu	WB, IHC(P)	MABC1032
Anti-Sin3A	Rabbit	Ms, Hu	WB, IC	06-913-I
Anti-TIM4/TIMD-4, clone Kat5-18	Armenian Hamster	Ms	FC, Neut	MABC958

LEGEND
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C Conjugated Antibodies

Cancer (continued)

Description	Details	Cat. No.
Small Molecules & Inhibitors		
MDM2 Inhibitor, SP-141	A cell-permeable pyrido[3,4-b]indole derivative that binds directly to the hydrophobic groove of MDM2 with high affinity (K_i = 28 nM) and inhibits its activity in multiple breast cancer cell lines, independent of their p53 status. Exhibits higher binding affinity than nutlin-3 (K_d = 45 nM). Acts by reducing MDM2 expression and promoting its ubiquitination and proteasomal degradation. Induces cell cycle arrest at the G2 phase and induces apoptosis in MCF-7, MCF-7 KD, and MDA-MB-468 breast cancer cells in a concentration-dependent manner. Also reported to diminish cell migration and reduce metastasis of breast cancer cells. Suppresses the growth of MCF-7 and MDA-MB-468 xenografts in nude mice (40 mg/kg/ 30 or 42 days, i.p.).	532814
miR-34a Activator, Rubone	A cell-permeable chalcone derivative that preferentially increases primary and mature miR-34a levels in Huh7 and HepG2 hepatocellular carcinoma cells (HCC) expressing wild-type or mutated p53, but does not affect miR-34a expression in non-tumorigenic Hep3B cells with deleted p53. Inhibits the luciferase activity in a HCC cell-based miR34a luciferase reporter system (IC_{50} = 3.8 µM). Causes a significant reduction in the mRNA and protein levels of cyclin D1 and Bcl-2 in Huh7 and HepG2 cells (~ 10 µM), but not in Hep3B cells. Also shown to reduce the levels of miR-34a targets (Cdk6, FOXP, Notch 1 and SIRT) and p53 targets (p21 and PUMA) in Huh7 and HepG2 cells, but not in Hep3B cells. Inhibits the growth of multiple HCC by inducing apoptosis and reducing proliferation, but shows no toxicity on non-tumorigenic Hu hepatocytes. Suppresses the growth of Huh7 and HepG2 xenografts in nude mice model (~90% inhibition at 50 mg/kg).	532980
Mitosis Inhibitor II, Dosabulin Enantiomers Set	A cell-permeable bridged bicycle heptene derived compound that can arrest mitosis (EC_{50} = 1.23 µM) by inducing tubulin depolymerization. Inhibits the growth of U2OS osteosarcoma cells (IC_{50} = 810 nM) and cause apoptotic cell death. Does neither affect the binding of vinblastine to tubulin nor does it displace colchicine, but is suggested to bind to a site that is vicinal or allosteric to it, which results in a reduced binding affinity for tubulin. The R-enantiomer of this compound lacks the ability to depolymemrize tubulin (>10 µM) and is included as a negative control. 1 set contains 2 mg (S)-Dosabulin (+) and 2 mg (R)-Dosabulin Negative Control (-).	530542
p21 Inhibitor, UC2288	A cell-permeable, orally available compound that selectively downregulates the expression of p21 (~10 µM), independent of p53 expression, at either transcription or post-transcriptional level. However, it does not affect the stability of p21. Also, it has no significant effect on the activities of Raf kinases, VEGFR2 kinase, or the phosphorylation state of ERK. Effectively blocks the growth of multiple cancer cell lines (GI_{50} ~ 10 µM against NCI60 cell lines). Its greater inhibitory effect on cytosolic p21 is indicative of its ability to induce apoptotic cell death in 786-O cells. Synergistically suppresses the growth of HCT116 and ACHN cells in athymic nude mice when combined with imetelstat, a telomerase inhibitor (15 mg/kg of UC2288, p.o., & 30 mg/kg of imetelstat, i.p., 3 times per week).	532813
Ral Activation Inhibitor, BQU57	A cell-permeable compound that binds and locks RalA/B in the inactive GDP-bound form by targeting an allosteric site close to the guanine nucleotide-binding pocket (K_d = 7.7 µM binding study by ITC using RalB) in a 1:1 stoichiometric ratio, while exhibiting little affinity toward free or GTP-bound Ral. Shown to inhibit anchorage-independent growth of Hu lung cancer cell lines H358 & H2122 *in vitro* (IC_{50} = 1.3 & 2.0 µM, respectively, in 2-4 wks by soft agar colony formation assays) by reducing cellular level of ATP-bound, active RalA/B (by >90% with 10 µM BQU57 treatment for 3 h). Shown to selectively downregulate levels of active RalA/B, but not Ras or RhoA, in H2122-derived tumor in mice in a dose-dependent manner (64% and 86% reduction of ATP-bound RalA and RalB, respectively, 3 h post single 50 mg/kg i.p. dosage)	532626
STAT3 Inhibitor XX, inS3-54	A cell permeable compound that selectively and non-covalently binds to STAT3 and inhibits its DNA binding activity in a dose and time dependent manner (IC_{50} = 13.8 µM after 29 hours incubation) and reduces the expression of STAT3 dependent genes (Cyclin D1, survivin, VEGF, MMP-2, MMP-9, and Twist) in A549 and MDA-MB-231 cells. However, it does not affect STAT3 dimerization or binding to the SH2 domain and has no effect on total STAT3 or basal level of Tyr705 phosphorylated STAT3. Preferentially induces apoptosis in cancer cells (A549 and MDA-MB-468) and inhibits their survival, but has much reduced effect on non-cancer IMR90 lung fibroblasts or MCF10A1 mammary epithelial cells. Shown to block cancer cell migration and invasion in a dose- and time-dependent manner.	531546

LEGEND

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C Conjugated Antibodies

Epigenetics

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-acetyl-Histone H4 (Lys16), AlexaFluor® 488	Rabbit	Hu, Ms	IC	07-329-AF488 (C)
Anti-acetyl-Histone H4, AlexaFluor® 488 Conjugate	Rabbit	Hu, Ms	IC	06-598-AF488 (C)
Anti-dimethyl-Histone H3 (Lys9), AlexaFluor® 488 Conjugate	Rabbit	Hu, Ms	IC	07-441-AF488 (C)
Anti-DIS3-like Exonuclease 2, clone 9H2.1	Mouse	Hu	WB	MABE1002
Anti-DNA G-quadruplex (G4), clone 1H6	Mouse	All	IC, IHC(P), ELISA, FC	MABE1126
Anti-DNA Ligase 3, clone 7H6.1	Mouse	Hu	WB, IC	MABE1011
Anti-DNA polymerase delta p125, clone 11E10.1	Mouse	Hu	WB	MABE967
Anti-DNAJB1/Hdj1, clone J25	Mouse	Hu, Ms, Rt	WB, IC, FC	MABE1116
Anti-HNF-1-β, clone 12A5.1	Mouse	Rt, Hu	WB, IHC	MABE971
Anti-Homeodomain-only Protein, clone 15C1.1	Mouse	Ms	WB	MABE989
Anti-KDM5B, clone 15G8.1	Mouse	Hu, Ms	WB, IHC(P)	MABE150
Anti-LHX2	Rabbit	Ms, Hu	WB, IF, ChIP-seq, ChIP	ABE1402
Anti-MafK/Nfe2u	Rabbit	Ms, Rt, Hu	WB, ChIP, EMSA	ABE1928
Anti-NRF-1, clone R157.1.3H3	Mouse	Hu	WB, ChIP, ChIP-seq	MABE995
Anti-OASIS/CREB3L1, clone 44C7	Mouse	Ms	WB	MABE1017
Anti-Paired box protein Pax-1, clone 7F11.2	Mouse	Hu	WB	MABE978
Anti-PIF1, clone 12A11.1	Mouse	Hu	WB	MABE1003
Anti-RNA polymerase II, clone CTD4H8, AlexaFluor® 488 Conjugate	Mouse	Hu, Ms	IC	05-623-AF488 (C)
Anti-RNA polymerase II, clone CTD4H8, AlexaFluor® 647 Conjugate	Mouse	Hu, Ms	IC	05-623-AF647 (C)
Anti-Sirt1 (Sir2), Alexa Fluor® 488 Conjugate	Rabbit	Hu, Ms	IC	07-131-AF488 (C)
Anti-Ubiquitin-conjugating enzyme E2 A	Rabbit	Hu, Ms, Rt	WB	ABE1407
Anti-UTX/KDM6A, clone 16F9.1	Mouse	Hu	WB	MABE201

Description	Details	Cat. No.
Small Molecules & Inhibitors		
BRPF1 BD Inhibitor	A cell-permeable dimethyl-benzimidazolone compound that acts as a highly potent, reversible, and acetylated lysine-competitive inhibitor of BRPF1 bromodomain (IC_{50} = 80 nM; K_d = 10 nM). Acts by displacing BRPF1 bromodomain from histone H3.3 (IC_{50} = 0.98 µM). Shown to directly interact with BRPF1 BD and display excellent selectivity over other bromodomains, such as BET (bromodomain and extra terminal), BRPF2 (pIC50 = 5.1), BRPF3 (pIC50 ≤ 4.0), and BRD4 B1 and BD2 (pIC50 ≤ 4.3).	532718
DOT1L Inhibitor, SYC-522	A cell permeable S-adenosyl-L-methionine (SAM) derivative that acts as a highly potent and selective inhibitor of histone 3-lysine79 (H3K79) methyltransferase DOT1L (K_i = 500 pM) and inhibits H3K79 methylation. Does not affect the activity of PRMT1, CARM1 and SUV39H1 (IC_{50} > 100 µM). Blocks cell cycle at the G0/G1 phase. Although it does not induce apoptosis, it sensitizes MLL rearranged leukemia cells to chemotherapeutic agents (mitoxantrone, etoposide, cytarabine) to cause apoptotic cell death. Shown to down-regulate the expression of HOXA9 and MEIS1, leukemia-relevant genes, by over 50%.	531711
SMYD2 Inhibitor, AZ505	A cell-permeable, potent, reversible inhibitor of SMYD2 (IC_{50} = 120 nM, K_i = 300 nM, K_d = 500 nM). Shown to bind to the peptide-binding groove of the enzyme. This binding is dependent on the presence of S-adenosylmethionine (SAM). The inhibition appears to be competitive with respect to substrate and uncompetitive with respect to SAM. Displays ~700-fold greater selectivity over SMYD3, DOT1L, EZH2, GLP, G9a and SET7/9 protein lysine methyl transferases (IC_{50} > 83.3 µM). Inhibits SMYD2-mediated p53-K370 methylation in U2OS cells (at ~10 µM), but does not affect methylation in cells transfected with a Y240F mutant.	531661

LEGEND

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(C) Conjugated Antibodies

Inflammation & Immunology

	Description	Host	Species Reactivity	Key Applications	Cat. No.
	Antibodies				
C	Anti-CD161 (NK1.1) (mouse), APC, clone PK136	Mouse	Ms	FC	MABF1487
C	Anti-CD161 (NK1.1) (mouse), APC, clone PK136	Mouse	Ms	FC	MABF1488
C	Anti-CD161 (NK1.1) (mouse), PE, clone PK136	Mouse	Ms	FC	MABF1491
C	Anti-CD11b, (Hu/mouse), FITC, clone M1/70	Rat	Hu, Ms	FC	MABF801
C	Anti-CD11b, (Hu/mouse), FITC, clone M1/70	Rat	Hu, Ms	FC	MABF802
C	Anti-CD11b, (Hu/mouse), FITC, clone M1/70	Rat	Hu, Ms	FC	MABF800
C	Anti-CD11b, (Hu/mouse), redFluor™ 710, clone M1/70	Rat	Hu, Ms	FC	MABF804
C	Anti-CD11b, (Hu/mouse), redFluor™ 710, clone M1/70	Rat	Hu, Ms	FC	MABF803
C	Anti-CD152 (CTLA-4) (mouse), PE-Cy7, clone UC10-4F10-11	Armenian Hamster	Ms	FC	MABF1585
C	Anti-CD152 (CTLA-4) (mouse), PE-Cy7, clone UC10-4F10-11	Armenian Hamster	Ms	FC	MABF1586
C	Anti-CD161 (NK1.1) (mouse), FITC, clone PK136	Mouse	Ms	FC	MABF1490
C	Anti-CD161 (NK1.1) (mouse), FITC, clone PK136	Mouse	Ms	FC	MABF1489
C	Anti-CD20, clone FMC7, Alexa Fluor® 647 Conjugate	Mouse	Hu	FC	MAB1217-AF647
	Anti-CD22, clone CY34	Mouse	Ms	FC, IP	MABF980
C	Anti-CD3e (Mouse), PE-Cy7, clone 145-2C11	Armenian Hamster	Ms	FC	MABF1582
C	Anti-CD3e (Mouse), PE-Cy7, clone 145-2C11	Armenian Hamster	Ms	FC	MABF1581
C	Anti-CD3e (Mouse), PerCP-Cy5.5, clone 145-2C11	Armenian Hamster	Ms	FC	MABF1584
C	Anti-CD3e (Mouse), PerCP-Cy5.5, clone 145-2C11	Armenian Hamster	Ms	FC	MABF1583
C	Anti-CD4 (Mouse), APC, clone RM4-5	Rat	Ms	FC	MABF1566
C	Anti-CD4 (Mouse), APC, clone RM4-5	Rat	Ms	FC	MABF1565
C	Anti-CD4 (Mouse), FITC, clone RM4-5	Rat	Ms	FC	MABF1568
C	Anti-CD4 (Mouse), FITC, clone RM4-5	Rat	Ms	FC	MABF1567
C	Anti-CD4 (Mouse), PerCP-Cy5.5, clone RM4-5	Rat	Ms	FC	MABF1574
C	Anti-CD4 (Mouse), PerCP-Cy5.5, clone RM4-5	Rat	Ms	FC	MABF1573
C	Anti-CD4 (Mouse), redFluor™ 710, clone RM4-5	Rat	Ms	FC	MABF1575
C	Anti-CD4 (Mouse), redFluor™ 710, clone RM4-5	Rat	Ms	FC	MABF1577
C	Anti-CD44, (Hu/mouse), FITC, clone IM7	Rat	Hu, Ms	FC	MABF1556
C	Anti-CD44, (Hu/mouse), FITC, clone IM7	Rat	Hu, Ms	FC	MABF1558
C	Anti-CD44, (Hu/mouse), FITC, clone IM7	Rat	Hu, Ms	FC	MABF1557
C	Anti-CD44, (Hu/mouse), PE, clone IM7	Rat	Hu, Ms	FC	MABF1559
C	Anti-CD44, (Hu/mouse), PE, clone IM7	Rat	Hu, Ms	FC	MABF1560
	Anti-CD45 (Mouse), clone 30-F11	Rat	Ms	FC	MABF1466
	Anti-CD46, clone 8A9.1	Mouse	Hu	WB, IC, FC	MABF293
C	Anti-CD80 (mouse), APC, clone 16-10A1	Armenian Hamster	Ms	FC	MABF1554
C	Anti-CD80 (mouse), APC, clone 16-10A1	Armenian Hamster	Ms	FC	MABF1555
C	Anti-CD8a (Mouse), APC, clone 53-6.7	Rat	Ms	FC	MABF1535
C	Anti-CD8a (Mouse), APC, clone 53-6.7	Rat	Ms	FC	MABF1536
C	Anti-CD8a (Mouse), APC-Cy7, clone 53-6.7	Rat	Ms	FC	MABF1537
C	Anti-CD8a (Mouse), FITC, clone 53-6.7	Rat	Ms	FC	MABF1542
C	Anti-CD8a (Mouse), FITC, clone 53-6.7	Rat	Ms	FC	MABF1541
C	Anti-CD8a (Mouse), PE, clone 53-6.7	Rat	Ms	FC	MABF1543
C	Anti-CD8a (Mouse), PE, clone 53-6.7	Rat	Ms	FC	MABF1544
C	Anti-CD8a (Mouse), PE-Cy7, clone 53-6.7	Rat	Ms	FC	MABF1546
C	Anti-CD8a (Mouse), PE-Cy7, clone 53-6.7	Rat	Ms	FC	MABF1545
C	Anti-CD8a (Mouse), PerCP-Cy5.5, clone 53-6.7	Rat	Ms	FC	MABF1548
C	Anti-CD8a (Mouse), PerCP-Cy5.5, clone 53-6.7	Rat	Ms	FC	MABF1547

LEGEND

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C Conjugated Antibodies

Inflammation & Immunology (continued)

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies (continued)				
Anti-CMKLR1, clone BZ194	Rat	Ms	FC	MABF1011
Anti-CXCR4, clone 12G5	Mouse	Hu	FC, IC, Neut	MABF981
Anti-DRBP76/ILF3	Rabbit	Hu	WB	ABF1070 C
Anti-F4/80 (mouse), APC, clone BM8.1	Rat	Ms	FC	MABF1523 C
Anti-F4/80 (mouse), APC, clone BM8.1	Rat	Ms	FC	MABF1524 C
Anti-F4/80 (mouse), PerCP-Cy5.5, clone BM8.1	Rat	Ms	FC	MABF1532 C
Anti-F4/80 (mouse), PerCP-Cy5.5, clone BM8.1	Rat	Ms	FC	MABF1531 C
Anti-F4/80 (mouse), violetFluor™ 450, clone BM8.1	Rat	Ms	FC	MABF1534 C
Anti-F4/80 (mouse), violetFluor™ 450, clone BM8.1	Rat	Ms	FC	MABF1533 C
Anti-Helios, clone 22F6	Armenian Hamster	Hu, Ms	FC	MABF856
Anti-IL-2 (mouse), PE, clone JES6-5H4	Rat	Ms	FC	MABF1509 C
Anti-IL-2 (mouse), PE, clone JES6-5H4	Rat	Ms	FC	MABF1510 C
Anti-KLRG1 (mouse), violetFluor™ 450, clone 2F1	Syrian Hamster	Ms	FC	MABF1444 C
Anti-KLRG1 (mouse), violetFluor™ 450, clone 2F1	Syrian Hamster	Ms	FC	MABF1445 C
Anti-Ly-6G (mouse), APC-Cy7, clone 1A8	Rat	Ms	FC	MABF1421 C
Anti-Ly-6G (mouse), APC-Cy7, clone 1A8	Rat	Ms	FC	MABF1420 C
Anti-Ly-6G (mouse), PE-Cy7, clone 1A8	Rat	Ms	FC	MABF1424 C
Anti-Ly-6G (mouse), PE-Cy7, clone 1A8	Rat	Ms	FC	MABF1425 C
Anti-Ly-6G (mouse), redFluor™ 710, clone 1A8	Rat	Ms	FC	MABF1429 C
Anti-Ly-6G (mouse), redFluor™ 710, clone 1A8	Rat	Ms	FC	MABF1428 C
Anti-Ly-6G (mouse), redFluor™ 710, clone RB6-8C5	Rat	Ms	FC	MABF1485 C
Anti-Ly-6G (mouse), redFluor™ 710, clone RB6-8C5	Rat	Ms	FC	MABF1486 C
Anti-Ly-6G (mouse), violetFluor™ 450, clone 1A8	Rat	Ms	FC	MABF1426 C
Anti-Ly-6G (mouse), violetFluor™ 450, clone 1A8	Rat	Ms	FC	MABF1427 C
Anti-Ly-6G (mouse), violetFluor™ 450, clone RB6-8C5	Rat	Ms	FC	MABF1483 C
Anti-Ly-6G (mouse), violetFluor™ 450, clone RB6-8C5	Rat	Ms	FC	MABF1484 C
Anti-MHC class II (I-A/I-E), APC, clone M5/114 .15.2	Rat	Ms	FC	MABF805 C
Anti-MHC class II (I-A/I-E), APC, clone M5/114 .15.2	Rat	Ms	FC	MABF806 C
Anti-MHC class II (I-A/I-E), redFluor™ 710, clone M5/114 .15.2	Rat	Ms	FC	MABF1415 C
Anti-MHC class II (I-A/I-E), redFluor™ 710, clone M5/114 .15.2	Rat	Ms	FC	MABF1414 C
Anti-MHC class II (I-A/I-E), violetFluor™ 450, clone M5/114 .15.2	Rat	Ms	FC	MABF1412 C
Anti-MHC class II (I-A/I-E), violetFluor™ 450, clone M5/114 .15.2	Rat	Ms	FC	MABF1413 C
Anti-mouse IFN gamma, violetFluor™ 450, clone XMG1.2	Rat	Ms	FC	MABF1521 C
Anti-MxA, clone M143 (CL143)	Mouse	Hu, Ms, Rt, GP	WB, IHC(P), FC	MABF938
Anti-MxB	Rabbit	Hu	WB	ABF1059
Anti-Myeloperoxidase, clone CLB-MPO-1/1,7.17, FITC conjugate	Mouse	Hu	FC	MABF941 C
Anti-OX40L (CD252) (mouse), PE-Cy7, clone RM134L	Rat	Ms	FC	MABF1446 C
Anti-OX40L (CD252) (mouse), PE-Cy7, clone RM134L	Rat	Ms	FC	MABF1447 C
Anti-SAMHD1, clone 4B5.1	Mouse	Hu	WB, IHC(P)	MABF860
Anti-TCL1A, clone TCL1A	Mouse	Hu	WB, IC	MABF1214-I

LEGEND

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C Conjugated Antibodies

Inflammation & Immunology (continued)

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies (continued)				
Anti-TCR β chain (mouse), FITC, clone H57-597	Armenian Hamster	Ms	FC	MABF1455
Anti-TCR β chain (mouse), FITC, clone H57-597	Armenian Hamster	Ms	FC	MABF1454
Anti-TCR β chain (mouse), violetFluor™ 450, clone H57-597	Armenian Hamster	Ms	FC	MABF1459
Anti-TCR β chain (mouse), violetFluor™ 450, clone H57-597	Armenian Hamster	Ms	FC	MABF1458
Anti-TER-119 (mouse), redFluor™ 710, clone TER-119	Rat	Ms	FC	MABF1441
Anti-TER-119 (mouse), redFluor™ 710, clone TER-119	Rat	Ms	FC	MABF1442
Anti-TER-119 (mouse), violetFluor™ 450, clone TER-119	Rat	Ms	FC	MABF1440
Anti-TER-119 (mouse), violetFluor™ 450, clone TER-119	Rat	Ms	FC	MABF1439

Cell Structure

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-α-Tubulin, tyrosinated, clone YL1/2	Rat	Hu, Ms, Rt, Bov, Yeast, Por, Chk	WB, IC, IHC, EM, ELISA, RIA	MAB1864-I
Anti-β Actin, arginylated (N-terminal)	Rabbit	Hu, Ms, Rt	WB, IC, DB	ABT264
Anti-Galectin-9, clone 1G3	Mouse	Hu	WB, IHC(P), ELISA, IC	MABT833
Anti-Integrin α5β1, clone BMA5	Rat	Ms	FC, IP, AF	MAB1984-I
Anti-Integrin αVβ3, clone 27.1 (VNR-1) (Azide Free)	Mouse	Hu, Rt	IHC(P), FC, AF	MAB1876-Z
Anti-Integrin αVβ3, clone LM609, Alexa Fluor® 555 Conjugate	Mouse	Avian, Rb, Bov, Can, Chk, Hu, Mky, Pig	IC	MAB1976-AF555
Anti-Integrin β1, activated, clone HUTS-4, AlexaFluor® 647 Conjugate	Mouse	Hu, Ms	IC	MAB2079-AF647
Anti-LBPA, clone 6C4	Mouse	All	IC, EM, ELISA, DB	MABT837
Anti-Partitioning-defective 3, Alexa Fluor® 488 Conjugate	Rabbit	Hu, Ms, Rt, Mky, Can, Frog	IC	07-330-AF488
Anti-PL Scramblase 1, clone 9A7	Mouse	Ms	WB	MABT887
Anti-Prelamin-A, clone 7G11	Rat	Ms	WB, IF	MABT345
Anti-Procollagen Type I, CT, clone PCIDG10 (Ascites Free)	Mouse	Hu, Ms, Rt, GP	IHC(P), IC, FC, ELISA	MAB1913-C

Stem Cell Research

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-Lgr5/GPR49, clone 5C8	Rat	Hu	FC, IC	MABD399
Anti-Stage-Specific Embryonic Antigen-3, clone MC-631	Rat	Hu	FC, IC, IF, IHC	MAB4303-I
Cell Culture Media & Reagents				
EmbryoMax® Advanced KSOM Embryo Medium			SCC, Embryo Culture	MR-101-D
Kits & Assays				
RiboJuice™ mRNA Transfection Kit				TR-1013

LEGEND

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C Conjugated Antibodies

Neuroscience

Description	Host	Species Reactivity	Key Applications	Cat. No.
Antibodies				
Anti-8-Oxoguanine, clone 483.15 (Ascites Free)	Mouse	Hu, Ms, Rt, Bov, Mky	IC, IHC, ELISA	MAB3560-C
Anti-Aldolase C, C-Term, clone 1A1	Mouse	Hu, Rt	WB, IC	MABN1844
Anti-Aldolase C, N-Term, clone 4A9	Mouse	Hu, Rt, Ms, Bov	WB, IC	MABN1845
Anti-Calpastatin, clone PI-11 (Ascites Free)	Mouse	Hu	WB, IHC(P), IC, IF	MAB3084-C
Anti-GD1a Ganglioside, clone GD1a-1 (Azide Free)	Mouse	Hu, Ms, Rt, Fish, Bov	IHC(P), EIA	MAB5606Z
Anti-Intersectin-1/ITSN1	Rabbit	Rt, Hu	WB, IP	ABN1378
Anti-Neurophysin 2/NP-AVP, clone PS 41	Mouse	Rt	WB, IHC, RIA, EM, IP, ELISA	MABN845
Anti-NUB1, clone 2E4.1	Mouse	Hu, Ms, Rt	WB	MABN797
Anti-phospho-Filamin-A (Ser2152), clone PS2	Mouse	Ms, Hu	WB, IC, IF	MABN1834
Anti-Potassium Channel Kv1.4	Rabbit	Rt, Ms	WB	AB5926-I
Anti-Retinal Dehydrogenase 1/ALDH1A1, clone 8D7.1	Mouse	Hu	WB, IHC(P)	MABN838
Anti-ROM1, clone 2H5	Mouse	Ms, Rt, Bov	WB, IHC	MABN1757
Anti-Senataxin (OY11)	Rabbit	Hu, Ms	WB	ABN421
Anti-SNAP-25, clone SP14 (Ascites Free)	Mouse	Hu, Ms, Rt, Bov, GP, Mky	WB, IHC(P), EM, AA	MAB331-C
Anti-Somatostatin Receptor Type 5	Rabbit	Hu, Ms, Rt	WB, IHC	AB5681-I
Anti-Sortilin, clone F11	Mouse	Hu, Ms	IHC(P), IC, WB, ELISA	MABN1792
Anti-Synaptophysin, clone SP15 (Ascites Free)	Mouse	Hu, Rt, Mky, Ms, Feline	WB, IHC, IC, ELISA	MAB329-C
Anti-Synaptophysin, clone SY38, AlexaFluor® 555 Conjugate	Mouse	Ms, Rt	IC	MAB5258-AF555
Anti-Syntaxin-1A, clone SP8 (Ascites Free)	Mouse	Hu, Rt, Ms, GP	WB, IHC(P), IF, AA, ELISA	MAB336-C
Anti-Tau, clone Tau-2 (Ascites Free)	Mouse	Hu, Rt	IHC	MAB375-C

Description	Details	Cat. No.
Small Molecules & Inhibitors		
Donecopride Fumarate	A cell permeable, brain penetrating piperidin-4-yl-propanone compound that that acts as a highly potent, selective and partial agonist of serotonin subtype 4 receptor ((h)5-HT4R; K_i = 10.4 nM and 48% efficacy compared to 5-HT control). Also acts as a potent, mixed type, competitive inhibitor of acetylcholinesterase (IC_{50} = 16 nM for Hu AChE) and offers selectivity over butyrylcholinesterase (IC_{50} = 3.5 µM). With respect to 5-HT2BR, it behaves like an inverse agonist (K_i = 1.6 nM). Promotes sAPPa secretion in COS-7 cells transiently expressing 5-HT4R (EC_{50} = 11.3 nM) and is shown to have a precognitive effect in murine model where it significantly improves discrimination index (6.3 vs -.0.22 in control mice; 0.3 mg/kg).	532383
NOX1 Inhibitor, NoxA1ds Set	A cell permeable peptide derived from the activation domain of NOXA1, with Y199A substitution that acts as a highly potent and isoform specific inhibitor of NADPH oxidase 1 (NOX1; IC_{50} = 19 nM). Acts by binding to NOX1 and disrupts its interaction with its activator subunit (NOXA1). Shown to block NOX1-derived production of superoxide (O2.-) in a reconstituted NOX1 cell-free system, but does not affect NOX2, NOX4, NOX5 or xanthine oxidase derived superoxide and has no scavenging effects on either superoxide or hydrogen peroxide. Also suppresses superoxide production in NOX1 expressing HT-29 colon carcinoma cells (IC_{50} = 100 nM) and in hypoxia-induced Hu pulmonary artery endothelial cells (HPAEC), but does not affect O2.- production in peritoneal macropages derived from NOX1-null mice. A scrambled peptide is also included as a negative control. set contains 5 mg NOX1 Inhibitor, NoxA1ds and 5 mg NOX1 Inhibitor, NoxA1ds Negative Control.	532759
Orai1 Inhibitor, AnCoA4	A cell-permeable, non-toxic compound that directly binds to the C-terminus region of Orai 1 and reduces its binding to STIM1 and blocks Ca^{2+} influx through the store operated calcium (SOC) channel (EC_{50} = 880 nM). Its binding to Orai 1 is localized to the region that controls channel gating and interaction with STIM1. Does not affect voltage-gated Ca^{2+} channels even at higher concentrations (~ 10 µM). Shown to be more effective if administered before STIM1 begins interacting with Orai 1. Also shown to inhibit the expression genes involved in T cell activation and blocks Jurkat T cell proliferation (~ 10 µM). Reduces lymphohistiocytic inflammation without causing any neutrophil and tissue damage.	532999

LEGEND

Species: Hu=Human, Ms=Mouse, Rt=Rat, Bov=Bovine, Chk=Chicken, Por=Porcine, Can=Canine, Mky=Monkey, Rb=Rabbit, GP=Guinea Pig

Applications: FC=Flow Cytometry, IC=Immunocytochemistry, IHC=Immunohistochemistry, IHC(P)=Immunohistochemistry (Paraffin), IF=Immunofluorescence, IP=Immunoprecipitation, WB=Western Blotting, Neut=Neutralizing, ChIP=Chromatin Immunoprecipitation, AA=Activity Assay, PIA=Peptide Inhibition Assay, DB=Dot Blot, EM=Electron Microscopy, RIA=Radioimmunoassay, AF=Affects Function, EMSA= Electrophoretic Mobility Shift Assay, EIA=Enzyme Immunoassay, SCC=Stem Cell Culture

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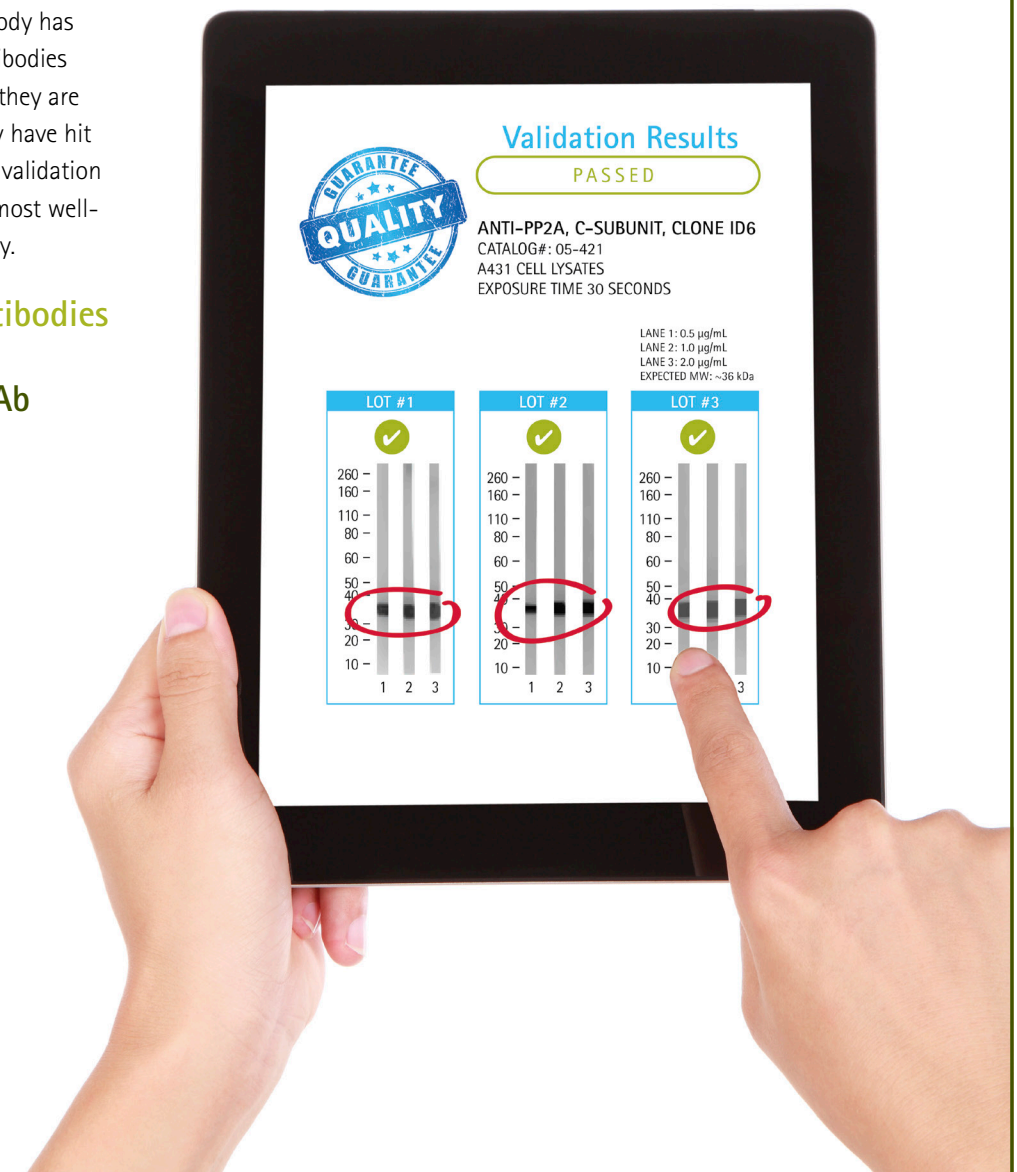

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