

New products

VOLUME 3 | 2012

ANTIBODIES, ASSAYS, SMALL MOLECULES, INHIBITORS, AND PROTEINS

Neuroscience

Epigenetics &
Gene Regulation

Signaling

Cell Structure

Stem Cell Research

Cancer

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

Histones and Histone Modifications

Histones influence complex epigenetic phenomena, from the packaging of DNA into chromatin fibers to gene regulation. Through dynamic patterns of post-translational modifications such as acetylation, methylation, and phosphorylation, occurring on their N- and C-terminal tails, histones provide binding sites for effector molecules of complex signaling networks that modulate chromatin remodeling, gene regulation, DNA repair, and mitosis. Immunodetection of modified histones is crucial to characterizing the role of histones in epigenetic signaling. Merck Millipore provides over 200 histone antibodies, enzyme assays, and specificity screening assays for the study of modified histones and related signaling proteins.

FEATURED ASSAY FAMILY:

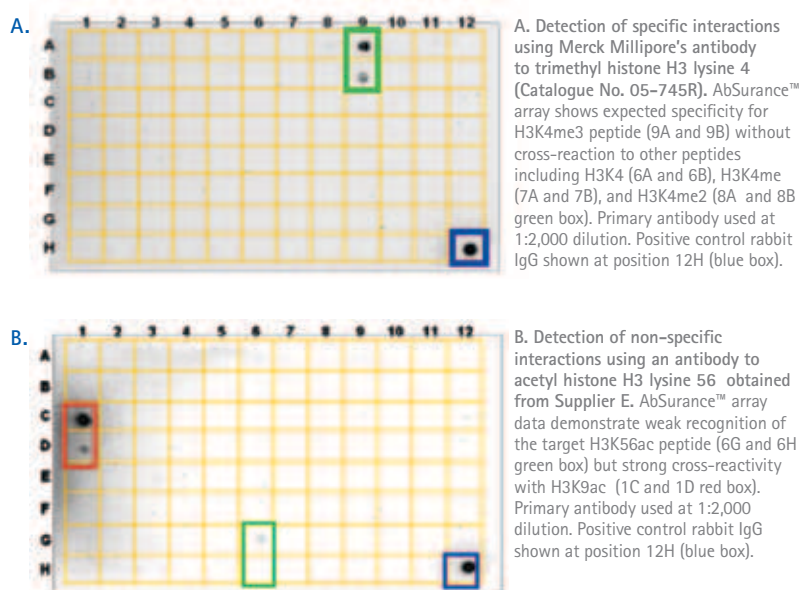
AbSurance™ Histone Antibody Specificity Arrays

Screening histone antibodies for specificity and cross-reactivity is important for downstream applications such as ChIP-chip and ChIP-seq. Easily screen antibodies directed against acetylated, phosphorylated, methylated, or unmodified H2A, H2B, H3, and H4 histones:

- 89 high quality peptides
- Easy-to-handle PVDF membranes
- Simple detection by chemiluminescence with film or CCD imagers
- No additional software tools required
- Built-in positive control primary antibodies from rat, mouse, sheep, and rabbit
- Consistent and uniform spotting of peptides using a proprietary process

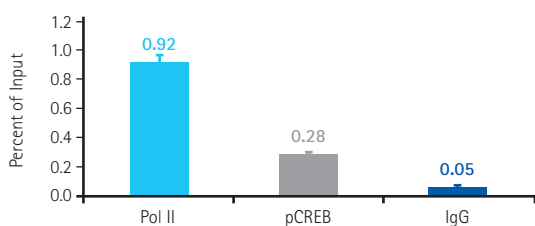
Description	Catalogue No.
H3 Array	16-667
H2A, H2B, H4 Array	16-665
Complete Core Histone Array	16-668

AbSurance™ detects specific and non-specific interactions



Magna ChIP™ HT96 Kit & Magna GrIP™ HT96 Rack Catalogue Nos. 17-10077 and 17-10071

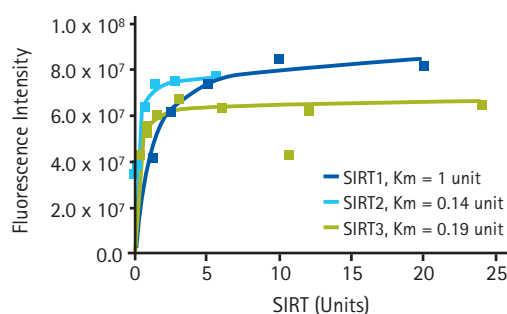
This high throughput ChIP kit provides a complete set of reagents and detailed protocols for up to 96 ChIP reactions from cells or tissues. The protocol requires less chromatin and antibody than standard protocols and includes high capacity protein A/G magnetic beads, which can be easily isolated using the Magna GrIP™ HT96 rack. Use the Magna ChIP™ HT96 kit for automated ChIP analysis of multiple chromatin samples in a single plate.



Sonicated chromatin prepared from 10,000 HeLa cells was subjected to chromatin immunoprecipitation using 1 µg of purified mouse IgG (M Catalogue No. 12-371B) or rabbit IgG (R, Catalogue No. 12-370) and specific antibodies (RNA Pol II, Catalogue No. 17-620; Phospho-CREB, Catalogue No. 17-10131; H3K4Me3, Catalogue No. 17-614), and the Magna ChIP™ HT96 Kit. Immunoprecipitation of antibody-associated DNA fragments was verified by qPCR using primers flanking the human GAPDH promoter. Error bars in represent standard deviation of qPCR triplicates.

SIRTainty™ Class III HDAC Assay Catalogue No. 17-10090

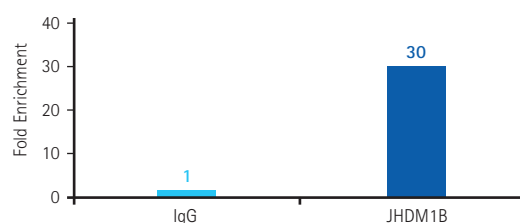
Sirtuins (Class III HDACs) couple deacetylation of protein substrates to cleavage of NAD⁺ to form nicotinamide and O-acetyl-ADP-ribose. This convenient assay uses nicotinamidase, which catalyzes the breakdown of the nicotinamide generated upon cleavage of NAD⁺ during sirtuin-mediated deacetylation of a substrate. To avoid the pitfalls of fluorescently tagged peptide substrates, the SIRTainty™ assay employs an untagged, acetylated peptide substrate. Use this reliable, no-wash assay for directly quantifying the activity of multiple sirtuin isoforms.



The SIRTainty™ sirtuin assay is effective with multiple sirtuin family members.

ChIPAb+™ JHDM1B Antibody/Primer Set Catalogue No. 17-10264

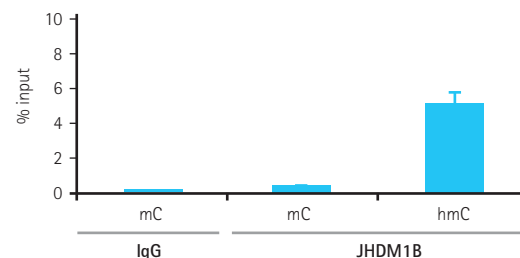
Avoid ChIP failure by using ChIPAb+™ kits, which provide high quality antibodies that have been validated in-house in ChIP and other immunoassays, a proven negative control antibody, and well-designed qPCR primers. Every lot of ChIPAb+™ kits is tested in ChIP. Use this new ChIPAb+™ antibody/primer set for effective immunoprecipitation and analysis of DNA associated with JHDM1B, a histone demethylase enzyme with roles in development and cancer. It catalyzes the demethylation of lysines on histone H3, potentially repressing genes.



Effective enrichment of JHDM1B-associated DNA using the ChIPAb+™ JHDM1B kit. Sonicated chromatin prepared from HeLa cells was subjected to chromatin immunoprecipitation using 2 µL of either Normal Rabbit IgG, or Anti-JHDM1B and the Magna ChIP™ A Kit (Catalogue No. 17-610). Successful immunoprecipitation of JHDM1B-associated DNA fragments was verified by qPCR using ChIPAb+™ Primers for human β-globin.

Anti-5-hydroxymethylcytosine (5hmC), clone HMC 31 Catalogue No. MABE251

5-hydroxymethylcytosine (5hmC) is an important modified DNA base formed from 5-methylcytosine by the family of Ten-Eleven Translocation (TET) enzymes. Relatively high levels of 5hmC have been found in the brain, and it may play a role in gene activation, brain maturation, and cognitive functioning. Clone HMC 31 is a protein G-purified monoclonal antibody specific for 5hmC residues. Use this antibody to investigate the epigenetic roles of 5hmC by applications such as methyl DNA immunoprecipitation (MeDIP).



DNA containing either methylated or hydroxymethylated cytosines was subjected to immunoprecipitation with Anti-5hmC, clone HMC 31 (Catalogue No. MABE251) or Anti-IgG. Immunoprecipitation of 5hmC was verified by qPCR. Data is presented as a percent input of each IP sample relative to input DNA.

Epigenetics & Gene Regulation

Description	Catalogue No.
Antibodies	
Anti-2,2,7-Trimethylguanosine, clone K121	MABE302
Anti-5-hydroxymethylcytosine (5hmC), clone HMC 31	MABE251
Anti-5-hydroxymethylcytosine, clone AB3/63.3	MABE176
Anti-5-methylcytosine, clone 33D3	MABE146
Anti-acetyl STAT5B (Lys694)	09-007
Anti-acetyl STAT5B (Lys701)	07-1352
Anti-acetyl-c-Myc (Lys148)	ABE25
Anti-acetyl-c-Myc (Lys157)	ABE27
Anti-acetyl-c-Myc (Lys323)	ABE26
Anti-acetyl-Histone H1 (Lys46)	06-1359
Anti-acetyl-lysine EPOR (Lys373)	07-1353
Anti-acetyl-MeCP2 (Lys464)	ABE28
Anti-acetyl-MVH (Lys405)	AB4332
Anti-Ago1, clone 4G7-E12	MABE143
Anti-Ago3, clone 4B1-F6	MABE144
Anti-ALKBH3	09-882
Anti-Ars2	ABE280
Anti-ASF1a, clone MPH7	MABE90
Anti-ATDC	ABE302
Anti-CDK5RAP2	06-1398
Anti-CDK5RAP2	ABE236
Anti-Cep63	06-1292
Anti-c-ErbB2/c-Neu, clone 3B5	MABE330
Anti-c-ErbB2/c-Neu, clone 9G6	MABE332
Anti-CHD-3	ABE86
Anti-c-Myc, clone 9E10	MABE282
Anti-DAZ	ABE374
Anti-Dnmt3l	ABD78
Anti-E2F4, clone LLF4-2	MABE160
Anti-Elp1	09-871
Anti-Estrogen Receptor β , clone 9.88	MABE290
Anti-Fox2	ABE184
Anti-FOXA2, clone 3C10	MABE110
Anti-FOXC1	ABD71
Anti-FTO, clone 5-2H10	MABE227
Anti-FXR2, clone 2C8.2	05-1214
Anti-GATA3, clone 3F1.1	MABE271
Anti-Gdown1	ABE23
Anti-HDAC1	ABE260
Anti-HDAC4	ABE262
Anti-HEN1 methyltransferase homolog 1	ABE38
Anti-HIF-1- α , hydroxyproline (Pro564)	07-1586
Anti-Histone H2A	ABE327
Anti-Histone H3.3	09-838
Anti-Histone Macro H2A.1	ABE215
Anti-hnRNP-P2, clone LHC7.15	MABE192
Anti-HoxA13, clone 11E12.1	MABE155
Anti-HoxB4, clone EP1919Y, rabbit monoclonal	MABE204
Anti-HoxD4, clone 8E11.1	MABE157
Anti-HpTGEKP motif	ABE319
Anti-human Ago4 clone 1B7-G11	MABE139
Anti-ID4, clone DML07	MABE164
Anti-IGF2BP2, clone 5E10-3E1	MABE232
Anti-JARID1D	ABE203
Anti-JMJD7	ABE90
Anti-JMJD8	ABE91
Anti-Katanin-like 1 (KL1)	ABE238
Anti-KEAP1	ABE597
Anti-Lin28	09-819
Anti-LSD1	ABE365

Description	Catalogue No.
Anti-Lymphoid-specific helicase (HELLS)	ABD41
Anti-MCM7, clone EP1974Y, rabbit monoclonal	MABE188
Anti-MDM2, clone IF2	MABE340
Anti-MEF2A, clone EP1706Y, rabbit monoclonal	MABE202
Anti-MIL1	ABE278
Anti-MLL-C	ABE240
Anti-mono/di/trimethyl-Histone H3 (Lys4), clone AW304	05-791R
Anti-monomethyl-Histone H3 (Lys79)	ABE213
Anti-mRNA-capping enzyme	06-1354
Anti-MSH2, clone FE11	MABE284
Anti-Musashi-2	MABE269
Anti-MYSM1/2A-DUB	ABE62
Anti-Nanos homolog 2	ABE252
Anti-N-CoR	ABE251
Anti-NEDD8 (N-term), clone Y297, rabbit monoclonal	MABE214
Anti-NET5	06-1013
Anti-NF κ B p65, CT	ABE347
Anti-N-Myc, clone NCM II 100	MABE333
Anti-NRMT	ABE263
Anti-NXF1	ABE81
Anti-p21WAF1, clone EA10	MABE325
Anti-p53 (panotropic), clone DO-1	MABE327
Anti-p53 (wild type), clone PAb1620	MABE339
Anti-p53, clone PAb421	MABE283
Anti-PARN, clone 7A7.1	05-1238
Anti-PCNA, clone PC10	MABE288
Anti-phospho HDAC1 (Ser421/Ser423)	07-1575
Anti-phospho STAT6 (Tyr641), clone 19E2.1	MABE270
Anti-phospho-ATR (Ser428)	ABE389
Anti-phospho-BRD2 (Ser37)	07-1526
Anti-phospho-Chk2 (Thr68)	ABE343
Anti-phospho-Estrogen Receptor α (Ser305), clone 124.9.4	05-922R
Anti-phospho-Histone H2A.X (Ser139), clone EP854(2)Y, rabbit monoclonal	MABE205
Anti-phospho-Histone H2A.X (Thr120), clone 11F5.3	MABE171
Anti-phospho-Histone H3 (Ser28), clone HTA28	MABE76
Anti-phospho-Histone H3 (Thr3), clone JY325	05-746R
Anti-phospho-IGF-1R (Tyr1161/Tyr1165/Tyr1166)	ABE332
Anti-phospho-p53 (Ser33), clone EP2393Y, rabbit monoclonal	MABE199
Anti-phospho-Progesterone Receptor (Ser190)	ABE303
Anti-phospho-Retinoblastoma (Thr821), clone E231, rabbit monoclonal	MABE197
Anti-phospho-STAT3 (Tyr68)	07-1347
Anti-POPDC2	06-1007
Anti-PRC1, clone EP1513Y, rabbit monoclonal	MABE198
Anti-PRDM11	ABE94
Anti-PRDM12	ABE95
Anti-PRDM4	ABE99
Anti-PRDM5	ABE114
Anti-Probable ergosterol biosynthetic protein 28	06-1028
Anti-Protein-arginine deiminase 4, clone 10F1	MABE254
Anti-Pygo1	ABE108
Anti-Pygo1 homolog 2	ABE109
Anti-RAD51	ABE257
Anti-RAR- α	ABE36
Anti-Rb2/p130, clone EP2141Y, rabbit monoclonal	MABE196
Anti-Replication Protein A, clone RPA34-19	MABE286
Anti-Replication Protein A, clone RPA34-20	MABE285
Anti-RNF168	06-1130

For published studies using this new product, visit:
www.millipore.com

For publications on using these small molecules, visit:
www.merck4biosciences.com

Epigenetics & Gene Regulation (continued)

Description	Catalogue No.
Anti-RNF168	ABE367
Anti-RNMT (mRNA methyltransferase)	06-1355
Anti-RSK1, clone E4, rabbit monoclonal	04-417
Anti-Runx3, clone R3-5G4	MABE145
Anti-Sirt5	ABE198
Anti-Sirt6	ABE102
Anti-Sirt7	ABE103
Anti-Smad4/DPC4	ABE21
Anti-SMARCA4, clone 20C3.2	MABE121
Anti-SMN2, clone SMN-KH	MABE230
Anti-TAF3	07-1802
Anti-TFIIF- α	07-1527
Anti-TMEM53	06-1012
Anti-TNRC6B	AB9913
Anti-TRIC-A	06-1005
Anti-trimethyl Histone H3 (Lys36)	ABE305
Anti-trimethyl-Histone H3 (Lys18)	ABE289
Anti-Tristetraprolin	ABE285
Anti-UBF, clone EP2741Y, rabbit monoclonal	MABE195
Anti-unmethylated-Histone H3 (Lys9), clone 9B1-2G6	MABE263
Anti-VMA21	06-1008
Anti-Werner's syndrome helicase (WRN), clone 20A11.1	MABD34
Anti-Wnt-1, clone 20C3.1	MABS95
Anti-WSTF, clone EP1704Y, rabbit monoclonal	MABE194
Anti-YB-1	ABE187
Anti-YBOX1/YB-1, clone EP2706Y, rabbit monoclonal	MABE193
Anti-Yes-associated protein (YAP1), clone 4D11.1	MABC203
Anti- α -Actinin-4	ABE304
ChIPAb+™ Acetyl-Histone H3 (Lys9/18)	17-10241
ChIPAb+™ Acetyl-Histone H4 (Lys12)	17-10121
ChIPAb+™ Dimethyl-Histone H4 (Arg3) Symmetric	17-10250
ChIPAb+™ FOXA1	17-10267
ChIPAb+™ FOXA2	17-10258
ChIPAb+™ HDAC1	17-10199
ChIPAb+™ HDAC2	17-10237
ChIPAb+™ HDAC3	17-10238
ChIPAb+™ Histone H2A.Bbd	17-10246
ChIPAb+™ Histone H3 (C-Term)	17-10254
ChIPAb+™ Histone H3.3	17-10245
ChIPAb+™ JHDM1B	17-10264
ChIPAb+™ JMJD1C	17-10262
ChIPAb+™ JMJD6	17-10263
ChIPAb+™ LSF	17-10252
ChIPAb+™ N-CoR	17-10260
ChIPAb+™ Trimethyl-Histone H3 (Lys9)	17-10242
Milli-Mark® Anti-Androgen Receptor, PG-21-PE	FCABS415PE
Milli-Mark® Anti-Histone H2B-FITC	FCABS377F
Milli-Mark® Anti-HMGB1/HMG-1-PE	FCABS376PE
Milli-Mark® Anti-monomethyl-Histone H3 (Lys9)-FITC	FCABS384F
Milli-Mark® Anti-Notch 1-PE, clone mN1A	FCMAB260PE
Milli-Mark® Anti-pan Histone-FITC, clone H11-4	FCMAB390F
Milli-Mark® Anti-PLK1-FITC, clone 35-206	FCMAB405F
Milli-Mark® Anti-PRMT5-PE	FCABS419PE
RIPAb+™ Ago1	03-249
RIPAb+™ Ago3	03-250
RIPAb+™ FXR2	03-246
RIPAb+™ Hexim 2	03-245
RIPAb+™ hnRNP C1/C2	03-205
RIPAb+™ hnRNP M1-M4	03-100

PUBLICATION HIGHLIGHT ON NEW ANTIBODIES:

Merck Millipore's newly released Anti-Survival of motor neuron 2, (SMN2), clone SMN-KH monoclonal antibody (MABE230) has been published in an important study describing a promising approach to treat spinal muscular atrophy (SMA), a genetic neurodegenerative disease with no known cure. Y. Hua of Cold Spring Harbor Laboratories, collaborating with coauthors from Isis Pharmaceuticals and Genzyme, presented their exciting results in a 2010 paper, titled: **Antisense correction of SMN2 splicing in the CNS rescues necrosis in a type III SMA mouse model***.

The authors identified a potent antisense oligonucleotide (ASO) that blocks an SMN2 intronic splicing silencer element, promoting the inclusion of exon 7. This ASO rescued an SMA mouse model that develops tail and ear necrosis, similar to the necrosis in the distal tissues of some human SMA infants. The researchers used the SMN-KH monoclonal antibody to measure long-lasting increases in SMN2 exon 7 inclusion protein levels in spinal motor neurons. The results suggested that this ASO could be a candidate for SMA therapy, and that ASOs in general could effectively redirect alternative splicing of CNS genes.

* Genes & Development (2010) 24:1634-1644.

Description	Catalogue No.
RIPAb+™ hnRNP U	03-206
RIPAb+™ IGF2 mRNA-binding protein 3	03-198
RIPAb+™ IGF2BP2	03-251
RIPAb+™ pan Ago	03-248
RIPAb+™ STAU1 (Staufen 1)	03-116
Small Molecules and Inhibitors	
HMTase Inhibitor V, UNC0224	382193-5MG
ICMT Inhibitor	420350-10MG
Ire17 α RNase Inhibitor, STF-083010	412510-10MG
Protein Methyltransferase Inhibitor II, BIX-01338	539212-2MG
Kits & Assays	
AbSurance™ Complete Core Histone Antibody Specificity Array	16-668
AbSurance™ Histone H2A, H2B, H4 Antibody Specificity Array	16-665
AbSurance™ Histone H3 Antibody Specificity Array	16-667
EZ-Magna ChIP™ A/G Chromatin Immunoprecipitation Kit	17-10086
EZ-Magna ChIP™ HT96 Chromatin Immunoprecipitation Kit	17-10078
LentiBrite™ Histone H2B-GFP Lentiviral Biosensor	17-10229
LentiBrite™ Histone H2B-RFP Lentiviral Biosensor	17-10228
Magna ChIP™ A/G Chromatin Immunoprecipitation Kit	17-10085
Magna ChIP™ HT96 Chromatin Immunoprecipitation Kit	17-10077
Magna ChIP™ Protein A+G Magnetic Beads	16-663
Magna ChIP™ Protein A+G Magnetic Beads	16-663X
Magna GriP™ HT96 Rack (for 96 well plates)	17-10071
SIRTainty™ Class III HDAC Assay	17-10090

For published studies using this new product, visit: www.millipore.com

For publications on using these small molecules, visit: www.merck4biosciences.com

Cell Structure

Description	Catalogue No.
Antibodies	
Anti-Actin, clone JLA20	MABT219
Anti-Aggregan (neopeptide), clone BC-3	MABT110
Anti-Aggregan, clone 6B4	MABT83
Anti-Aggregan, clone 7D1	MABT109
Anti-Ahi-1 (Jouberin), clone C-mAh1-1 M5	MABT138
Anti-Calreticulin, clone 16B11.1	MABT217
Anti-Dentin sialoprotein, clone 2C12.3	MABT37
Anti-Desmoglein-1, clone 32-2B	MABT118
Anti-FucT-III	ABT115
Anti-FucT-VI	ABT116
Anti-Fyn, clone EPR5500, rabbit monoclonal	MABT208
Anti-Girdin, coiled-coil region	ABT80
Anti-Integrin α -V, clone 272-17E6 (Azide free)	MABT207
Anti-Lnk/SH2B adapter protein 3	ABT108
Anti-LPA receptor 3 (Edg-7)	ABT113
Anti-phospho-Peak (Tyr665)	ABT52
Anti-Sarcolipin	ABT13
Anti-SDHD (CybS)	ABT110
Anti-Titin (N-terminal/Z-domain), clone 17D11.1	MABT75
Anti-VASA (DDX4)	MABD46
Anti- α -Actin (smooth muscle), clone EPR5368, rabbit monoclonal	MABT381
Anti- α -Actinin-4	ABE304
Anti- α -Tubulin, clone DM1A	MABT205
Small Molecules and Inhibitors	
Leukadherin-1	434610-25MG
MMP-9 Inhibitor II	444293-10MG
Kits & Assays	
Cell Comb™ Scratch Assay	17-10191
LentiBrite™ GFP- β -actin Lentiviral Biosensor	17-10204

Neuroscience

Description	Catalogue No.
Antibodies	
Anti-ARX, clone 11F6.2	MABN102
Anti-Gsh2	ABN162
Anti-Netrin receptor DCC, clone 2A11.1	MABN101
Anti-NeuN (rabbit monoclonal), clone 27-4	MABN140
Anti-NeuN purified	ABN90P
Anti-Synaptotagmin 3, clone 1E4.2	MABN108
Anti-Tau, a.a. 210-241, clone Tau-5	MABN162
Small Molecules and Inhibitors	
ARE Activator, BTZO-1	181315-10MG
Kir2.1 Inhibitor, ML133	422689-5MG
NAAG	481920-50MG
Nrf2 Activator	492040-25MG
O-GlcNAcase Inhibitor, TMG	110165-25MG
γ -Secretase Inhibitor XXIV, BMS299897	565793-5MG
Kits & Assays	
AXIS™ Axon Isolation Device, 150 μ m, Plasma Bonded	AX15005PBC
AXIS™ Axon Isolation Device, 500 μ m, Plasma Bonded	AX50005PBC
Proteins & Enzymes	
BDNF, Human Recombinant Animal Free	GF301
NT-3, Human Recombinant Animal Free	GF308
NT-4, Human Recombinant Animal Free	GF309
TNF- α , Human Recombinant Animal Free	GF314

PUBLICATION HIGHLIGHT ON NEW ANTIBODIES:

Merck Millipore's newly released Anti-Aggregan, clone 6B4 monoclonal antibody (MABT83) has been published in a study that may advance the development of cell-based cartilage repair therapies. Williams and colleagues present their results in the 2010 paper, titled: **Identification and Clonal Characterization of a Progenitor Cell Subpopulation in Normal Human Articular Cartilage***.

The researchers used the aggregan clone 6B4 monoclonal antibody to isolate and characterize cartilage stem cells in a permanent resident human cartilage progenitor population. These stem cells maintained chondrogenicity upon extensive expansion, unlike full-depth chondrocytes that lose this ability at only seven population doublings. Monolayer cultures subjected to chondrogenic induction expressed various early and mature chondrocyte markers, including aggregan, sox9 and collagen, indicating the potential of these cells for cartilage repair.

*Williams, R., et al. (2010). PLoS One. 5(10):e13246.

Secondary Antibodies

Description	Catalogue No.
Antibodies	
Sheep anti-Human IgM, (Fc)	AP512
Sheep anti-Human IgM, (Fc), FITC conjugate	AP512F
Sheep Anti-Human IgM, (Fc), HRP Conjugate	AP512P

Metabolism

Description	Catalogue No.
Antibodies	
Anti-phospho-IGF-1R (Tyr1161/Tyr1165/Tyr1166)	ABE332
RIPAb+™ IGF2 mRNA-binding protein 3	03-198
RIPAb+™ IGF2BP2	03-251
Small Molecules and Inhibitors	
Fatty Acid Synthase Inhibitor, Cpd 10v	341326-5MG
Carbonic Anhydrase IX/XII Inhibitor	215900-5MG
Carbonic Anhydrase IX/XII Inhibitor II, U-104	215901-5MG

For published studies using this new product, visit: www.millipore.com

For publications on using these small molecules, visit: www.merck4biosciences.com

Stem Cells

Description	Catalogue No.
Antibodies	
Anti-Apelin receptor	ABD43
Small Molecules and Inhibitors	
BMP Inhibitor II, DMH1	203646-5MG
iPSC Induction Enhancer, Thiazovivin	420220-10MG
Pro-survival Compound, DDD00033325	529659-10MG
Wnt Pathway Inhibitor XII, 21H7	681679-10MG
β -Catenin/Tcf Inhibitor II, PKF118-310	219331-10MG
Kits & Assays	
Human iPS Cell Boost Supplement II	SCM094
Human STEMCCA™ Cre-Excisable Constitutive Polycistronic (OKS/L-Myc) Lentivirus Reprogramming Kit	SCR548
Proteins & Enzymes	
Activin A, Human Recombinant Animal Free	GF300
ANG-1, Human Recombinant	GF164
ANG-2, Human Recombinant	GF165
BMP-2, Human Recombinant	GF166
BMP-4, Human Recombinant	GF167
BMP-4, Human Recombinant Animal Free	GF302
BMP-6, Human Recombinant	GF168
BMP-7, Human Recombinant	GF169
DKK-1, Human Recombinant	GF170
EGF, Human Recombinant Animal Free	GF316
Endostatin, Human Recombinant	GF171
FGF-10, Human Recombinant	GF172
G-CSF, Human Recombinant Animal Free	GF303
GM-CSF, Human Recombinant Animal Free	GF304
IFN- γ , Human Recombinant Animal Free	GF305
IGF-I, Human Recombinant Animal Free	GF306
NOGGIN, Human Recombinant	GF173
PDGF-BB, Human Recombinant Animal Free	GF310
RANTES, Human Recombinant Animal Free	GF311
SCF, Human Recombinant Animal Free	GF312
Sonic Hedgehog (Shh), Human Recombinant	GF174
TGF- α , Human Recombinant Animal Free	GF313
VEGF165, Human Recombinant Animal Free	GF315
WNT-1, Human Recombinant	GF175
β -NGF, Human Recombinant Animal Free	GF307

For published studies using this new product, visit: www.millipore.com

For publications on using these small molecules, visit: www.merck4biosciences.com

PUBLICATION HIGHLIGHT ON NEW INHIBITORS:

Merck Millipore's newly released iPSC Induction Enhancer, thiazovivin, enhances the survival of human embryonic stem cells even after their dissociation, as shown in the paper titled: **Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules***.

Xu and colleagues from the Scripps Research Institute in La Jolla showed that thiazovivin inhibited Rho kinase activity with 5 times more potency than did Y-27632. Rho kinase inhibition is the likely mechanism of action by which thiazovivin enhances hESC survival and maintains their pluripotency following dissociation.

*Xu Y, Zhu X, Hahm HS, Wei W, Hao E, Hayek A, Ding S. (2010). Proc. Natl. Acad. Sci. USA. 107, 8129-8134.

Cancer

Description	Catalogue No.
Antibodies	
Anti-APC, clone CC-1	MABC200
Anti-Atg13, clone 2H4.2	MABC46
Anti-BNIP1-2, clone 8C11.1	MABC74
Anti-BRCA1, clone MS110	MABC199
Anti-BRCA1, clone MS13	MABC161
Anti-c-ErbB2/c-Neu, clone 3B5	MABE330
Anti-c-ErbB2/c-Neu, clone 9G6	MABE332
Anti-c-Myc, clone 9E10	MABE282
Anti-EGFR, clone 225 (Azide-free)	MABF120
Anti-Estrogen Receptor β , clone 9.88	MABE290
Anti-HRS (HGS)	ABC35
Anti-KISS-1, clone 8H4.1	MABC60
Anti-LC3A (N-term), clone EP1528Y, rabbit monoclonal	MABC177
Anti-LC3A, clone EP1754, rabbit monoclonal	MABC175
Anti-LC3A/B (N-term), clone EP1983Y, rabbit monoclonal	MABC176
Anti-Megf10	ABC10
Anti-phospho-EGFR (Tyr1068), clone EP774Y, rabbit monoclonal	04-339
Anti-phospho-EGFR (Tyr1086), clone Y39, rabbit monoclonal	04-340
Anti-phospho-Estrogen Receptor α (Ser305), clone 124.9.4	05-922R
Anti-phospho-Retinoblastoma (Thr821), clone E231, rabbit monoclonal	MABE197
Anti-RIG-I, C-terminus	06-1041
Anti-Stabilin-2, clone mAb-174	MABC76
Anti-sTRAIL, clone III6F	MABF118
Anti-SV40 Large T Antigen, clone PAb416	MABF121
Anti-TRAIL-R2 (CD262), clone MD5-1	MABC13
Anti-USP18 (UBP43), clone 1C3.1	MABC113
Small Molecules and Inhibitors	
14-3-3 Antagonist I, 2-5	100081-5MG
Heat Shock Factor 1 Inhibitor, KRIBB11	385570-10MG
Pre-mRNA Splicing Inhibitor, Isoginkgetin	416154-10MG
VEGFR Tyrosine Kinase Inhibitor VI, AAL-993	676504-10MG
VEGFR2 Kinase Inhibitor VII, SKLB1002	676505-10MG

Signaling

Description	Catalogue No.
Antibodies	
Anti-AMPyated Tyrosine	ABS184
Anti-CHIP, clone 2F2.1	MABS133
Anti-c-K-Ras, clone 234-4.2	MABS194
Anti-CPT1A	ABS65
Anti-CPT2	ABS85
Anti-EGFR, clone 225 (Azide-free)	MABF120
Anti-EGFR, clone 528 (Azide-free)	MABF119
Anti-EGFR, clone E114, rabbit monoclonal	04-337
Anti-Glycerol-3-Phosphate Dehydrogenase 1, clone 4A12.1	MABS188
Anti-GSK3, clone Y174, rabbit monoclonal	04-361
Anti-GSK3 α , clone EP793Y, rabbit monoclonal	04-360
Anti-HER4/ErbB4, clone E200, rabbit monoclonal	04-348
Anti-HMG-CoA reductase	ABS229
Anti-IKK α , clone Y463, rabbit monoclonal	04-365
Anti-IKK β , clone Y466, rabbit monoclonal	04-366
Anti-IRAK-4 (N-term), clone Y279, rabbit monoclonal	04-368
Anti-Lck/p56, clone Y123, rabbit monoclonal	04-372
Anti-MAP Kinase 2/Erk2, clone E460, rabbit monoclonal	04-349
Anti-mTOR/FRAP, clone 22C2	MABS196
Anti-OX40L (CD252), clone RM134L	04-1470
Anti-Pan-Ras, clone RAS 10	MABS195
Anti-PDGF Receptor β (C-term), clone Y92, rabbit monoclonal	04-397
Anti-phospho Grb10 (Ser503)	07-1519
Anti-phospho-EGFR (Tyr1068), clone EP774Y, rabbit monoclonal	04-339
Anti-phospho-EGFR (Tyr1086), clone Y39, rabbit monoclonal	04-340
Anti-phospho-p70 S6 Kinase (Thr389), clone 10G7.1	MABS82
Anti-PTP1B, clone FG6-1G	MABS197
Anti-TBK1/NAK (N-term), clone EP611Y, rabbit monoclonal	04-387
Anti-Ubiquitin	07-2130
Anti-v-Src, clone 327	MABS193

Description	Catalogue No.
Small Molecules and Inhibitors	
Akt Inhibitor XVIII, SC66	124036-25MG
AMPK Signaling Agonist, F17	171263-5MG
Anaphase-Promoting Complex Inhibitor Negative Control, AAME	172103-50MG
Aurora Kinase Inhibitor VI, ZM447439	189410-5MG
Berberine Chloride	200275-25MG
Cancer Hydrolase KIAA1363 Inhibitor, JW480	420175-10MG
Cdc2-Like Kinase Inhibitor IV, KH-CB19	219511-10MG
Cdk4 Inhibitor V	219503-5MG
CXCR2 antagonist, Cpd 19	239819-2MG
Daptomycin, Streptomyces sp.	268320-5MG
Fatty Acid Synthase Inhibitor, Cpd 10v	341326-5MG
Foxo1 Inhibitor, AS1842856	344355-10MG
Glyphosine	356790-5GM
GSK-3 β Inhibitor XXIV	361567-5MG
GSK-3 β Inhibitor XXVI	361569-5MG
Hdm2 E3 Ligase Inhibitor II, HLI373	373226-5MG
InSolution™ AMPK Inhibitor, Compound C●2HCl	171264-2MG
InSolution™ MEK1/2 Inhibitor III, PD0325901	444968-5MG
InSolution™ Simvastatin, Sodium Salt	567022-5MG
MIF Antagonist IV, RDR 03785	475847-10MG
PI 3-K/mTOR Inhibitor III, PKI-179	526561-5MG
PIM Kinase Inhibitor VIII, R8-T198wt	526527-5MG
S1P4 Receptor Antagonist, CYM50358	567737-5MG
Stat3 Inhibitor XIII, C188-9	573128-10MG
Stat3 Inhibitor XVI	407625-5MG
Topoisomerase II Inhibitor, BNS-22	614853-10MG
USP14-Proteasome Inhibitor, IU1	662210-10MG
VEGFR Tyrosine Kinase Inhibitor VI, AAL-993	676504-10MG
VEGFR2 Kinase Inhibitor VII, SKLB1002	676505-10MG



For published studies using this new product, visit: www.millipore.com

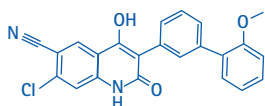
For publications on using these small molecules, visit: www.merck4biosciences.com

NEW CALBIOCHEM® PRODUCT HIGHLIGHTS

Fatty Acid Synthase Inhibitor, Cpd 10v

Catalogue No. 341326

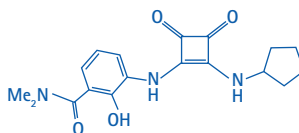
Due to its central role in lipid metabolism, fatty acid synthase (FAS) is viewed as a potential target for metabolic syndrome as well as a possible oncoprotein. Study the FAS pathway using Cpd 10v, a hydroxyquinolinone derivative that acts as a potent reversible inhibitor of type 1 FAS (IC_{50} = 19 nM).



CXCR2 antagonist, Cpd 19

Catalogue No. 239819

This potent antagonist of chemokine receptor CXCR2 (IL8RB, IC_{50} = 8 nM) is a stable, cell-permeable cyclobutenedione derivative, ideal for chemical genetics studies of chemokine-activated chemotaxis of neutrophils toward sites of inflammation. Overexpression of CXCR2 and its ligand, IL-8, are associated with diseases caused by dysregulated inflammation, such as arthritis, asthma, and chronic obstructive pulmonary disease.



Calbiochem®
Publish or Perish



Positively the best place for your antibody search

www.millipore.com/antibodies

Rely on the **COMBINED EXPERTISE** of Chemicon® and Upstate® & our 100% Antibody Performance Promise.

FIND ANTIBODIES within major and emerging **RESEARCH AREAS** validated against specific applications like Western blot, flow cytometry, quantitative cell imaging (HCA), and more.

SEARCH FOR ANTIBODIES AND ASSAYS BY KEYWORD, gene symbol, Entrez gene number, or UniProt number and refine your search using a number of antibody- and assay-specific filters.

QUICKLY LINK OUT to associated products.



Find the latest antibodies, assays & small molecules

www.millipore.com/newproducts

Browse by **RESEARCH AREA** or...

browse by **APPLICATION**...

and **QUICKLY LINK TO FEATURED PRODUCTS**, updated regularly.



To Place an Order or Receive Technical Assistance

In Europe, please call Customer Service:

France: 0825 045 645
Germany: 01805 045 645
Italy: 848 845 645
Spain: 901 516 645 Option 1
Switzerland: 0848 645 645
United Kingdom: 0870 900 46 45

For other countries across Europe, please call:
+44 (0) 115 943 0840

Or visit: www.merckmillipore.com/offices
For Technical Service visit: www.merckmillipore.com/techservice

