Cellular, Cytoskeletal and Organelle Markers

Neuroscience Antibodies and Reagents

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BioLegend®

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02-0019-00

World-Class Quality | Superior Customer Support | Outstanding Value

Introduction

BioLegend's Neuroscience portfolio offers affordable, high quality reagents to serve the research community within areas such as neurodegeneration, synaptic biology, neuroinflammation, and basic neurobiology. Our antibody products are selected, characterized, and validated through a rigorous process to ensure the highest standards for quality and reproducibility. The extensive collection of antibodies for cell surface, cytoskeletal, and organelle markers are tremendously valuable for neuroscience research and are a powerful tool when utilized across orthogonal applications, such as these:

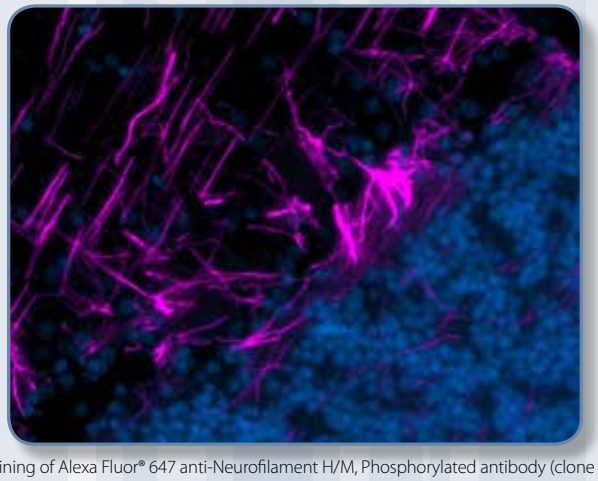
Utility	Immunohistochemistry	Immunocytochemistry	Western Blotting
Cell type distinction	☑	☑	
Cellular phenotype or morphology visualization	☑	☑	
Cellular localization assessment	☑	☑	
Subcellular localization detection	☑	☑	☑
Cell activation status	☑	☑	☑
Neuronal process integrity evaluation	☑	☑	
Protein interactions			☑
Protein expression levels	☑	☑	☑

In addition, our cell surface marker antibodies are ideal for specific cell isolation and work well with our MojoSort™ cell separation systems. Furthermore, we have expanded our portfolio of directly conjugated primary antibodies in HRP, Biotin, and Alexa Fluor® formats. HRP and Alexa Fluor® conjugated antibodies allow one step staining and simplify western blotting and immunostaining procedures by eliminating the need for a secondary antibody.

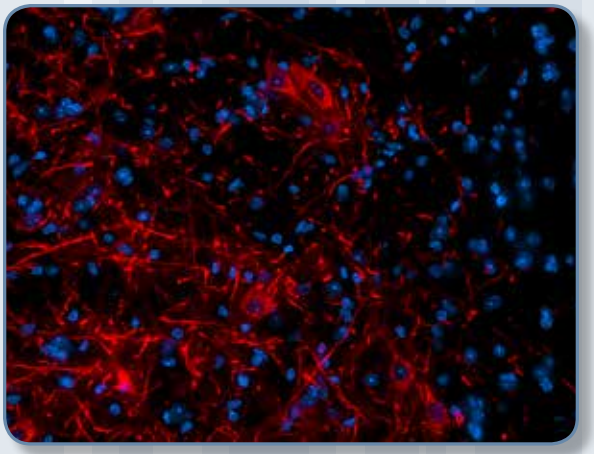
BioLegend is also proud to offer the SMI® monoclonal antibody product line, which has become the gold standard in immunohistochemical studies, as these antibodies have been extensively characterized and demonstrate strong, specific, and consistent results in identifying their intended target. Choose from a selection of antibodies for phosphorylated and non-phosphorylated neurofilaments, myelin basic protein, GFAP, MAP2, and others.

To explore the full line of products, visit: biolegend.com/neuroscience

Neurofilaments (NFs) are the major components of the neuronal cytoskeleton and primarily function to provide structural support for axons. Three mammalian neurofilament subunits, NF-L, NF-M, and NF-H, are classified based on their molecular weights. Antibodies against NFs are an ideal tool for distinguishing neurons from glial cells, which do not express NFs. Furthermore, antibodies that can detect NF modifications by immunostaining are of great diagnostic value for neuropathology detection, since abnormal NF modifications have been associated with neurodegenerative diseases.



IHC staining of Alexa Fluor® 647 anti-Neurofilament H/M, Phosphorylated antibody (clone SMI 310, magenta) on FFPE human cerebellum tissue. Nuclei were counterstained with DAPI (blue).



IHC staining of Alexa Fluor® 594 anti-Neurofilament H (NF-H), Non-Phosphorylated antibody (clone SMI 32, red) on frozen mouse brain tissue. Nuclei were counterstained with DAPI (blue).

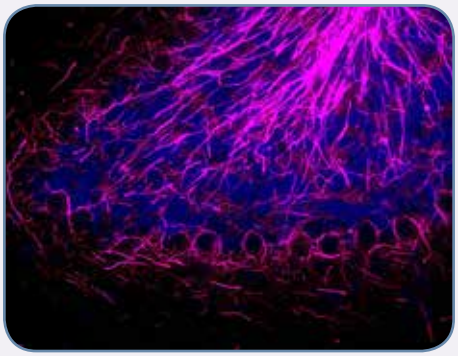
Cellular & Cytoskeletal Marker Antibodies

Neuronal Markers

Specificity	Clone	Reactivity	Application
Enolase	NSE-P1*	Hu, Ms, Rat	IHC-P, ICC
	NSE-P2	Hu	WB, IHC-P
FOX3 (NeuN)	1B7	Hu, Ms, Rat	WB, IHC-P, ICC
Glutamic Acid Decarboxylase (GAD65/GAD2)	N-GAD65*	Hu, Ms, Rat	WB, IHC-P
Neurofilament Light	NFL2	Hu, Ms, Rat	WB, IHC-P
	NFL3*	Hu, Ms, Rat	WB, IHC-P
Neurofilament Medium	Poly28227	Hu, Ms, Rat	WB, IHC-P
	Poly28410	Hu, Ms, Rat	WB, IHP-P
Neurofilament Medium & Heavy	RMdO-20	Hu, Ms, Rat	WB
Neurofilament Medium & Heavy, Non-Phosphorylated	SMI 33	Hu, Ms, Rat	WB, IHC-P
Neurofilament Medium & Heavy, Hypophosphorylated	SMI 35*	Hu, Ms, Rat	WB, IHC-P, ICC
Neurofilament Medium & Heavy, Phosphorylated	SMI 310*	Hu, Ms, Rat	WB, IHC-P
Neurofilament Heavy, Non-Phosphorylated	Poly28226	Hu, Ms, Rat	WB, IHC-P
	Poly28408	Hu, Ms, Rat	WB, IHC-P
	SMI 32*	Hu, Ms, Rat	WB, IHC-P, ICC
	SMI 37*	Mammalian	WB, IHC-P
	SMI 38*	Hu, Rat	WB, IHC-P
	SMI 39	Mammalian	IHC-P
Neurofilament Heavy, Phosphorylated	SMI 31*	Hu, Ms, Rat	WB, IHC-P, ICC
	SMI 34	Mammalian	WB, IHC-P
	SMI 36	Mammalian	WB, IHC-P
Neurofilament Marker (pan axonal, cocktail)	SMI 311	Mammalian	WB, IHC-P
	SMI 312	Hu, Ms, Rat	WB, IHC-P
MAP2	AA6	Mammalian	WB
	Poly18406	Mammalian	WB, IHC-P
	Poly28225	Hu, Ms, Rat	IHC-P
	SMI 52*	Ms, Rat	IHC-P
Tubulin β3	AA10*	Hu, Ms, Rat	WB, IHC-P, IHC-F, ICFC
	Poly18020*	Hu, Ms, Rat	WB, IHC-P
	TUJ1*	Hu, Ms, Rat	WB, IHC-P, ICC
Tubulin β3, Depolymerized	SMI 61	Mammalian	WB, IHC-P, ICC
Tubulin β3, Polymerized	SMI 62	Mammalian	WB, ICC
Tyrosine Hydroxylase	2/40/15	Hu, Ms, Rat	WB, IHC-P

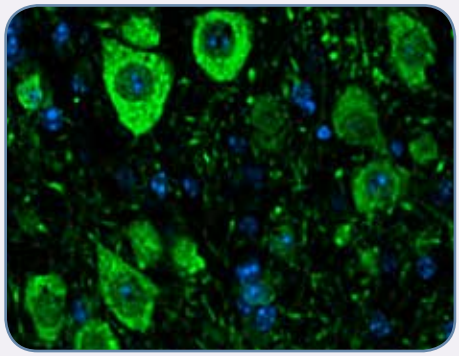
*Multiple conjugated formats available.

Neurofilament H/M, Hypophosphorylated



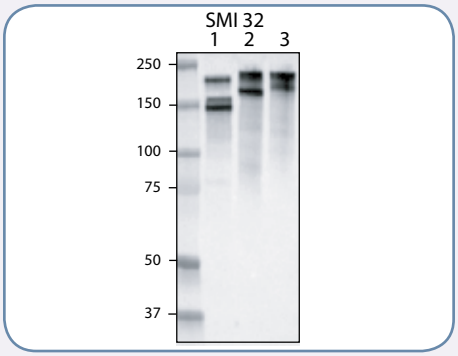
IHC staining of Alexa Fluor® 647 anti-Neurofilament H/M, Hypophosphorylated antibody (clone SMI 35, magenta) on FFPE mouse brain tissue. Nuclei were counterstained with DAPI (blue).

NSE



IHC staining of purified anti-NSE antibody (clone NSE-P1, green) on FFPE mouse brain tissue. Nuclei were counterstained with DAPI (blue).

Neurofilament H



Western blot of HRP anti-Neurofilament H (NF-H), Nonphosphorylated antibody (clone SMI 32). Lane 1: 20 µg of human brain lysate; Lane 2: 20 µg of rat brain lysate; Lane 3: 20 µg of mouse brain lysate.

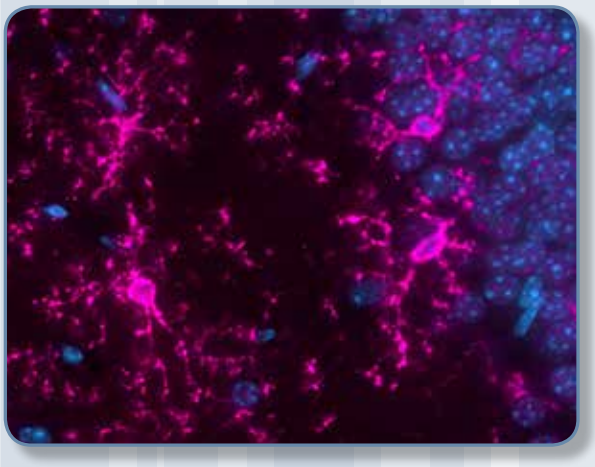
Microglia Markers

Specificity	Clone	Reactivity	Application
CD11b	CBRM1/5*	Hu	IP, FC
	ICRF44*	Hu, NHP	IHC-F, ICC, FC, CyTOF®
	M1/70*	Hu, Ms, NHP	IHC, IF, IP, FC, CyTOF®
CD45	2D1*	Hu	IHC, IF, FC
	HI30*	Hu, NHP	WB, IHC, IF, FC, CyTOF®
	HI100*	Hu, NHP	IHC, ICC, FC, CyTOF®
	MEM-55*	Hu	WB, IHC-P, FC
	RA3-6B2*	Hu, Ms, Cat	IHC-F, IP, FC, CyTOF®
	Tü116	Hu, NHP	FC
CD68	FA-11*	Ms	WB, IHC-F, IP, FC, ICFC
	KP1	Hu	WB, IHC-P, IP
	Y1/82A*	Hu	IHC, ICC, ICFC
Chil3/Ym1	A17046B	Ms	WB
CX3CR1	2A9-1*	Hu	FC
	8E10.D9*	Hu	WB, IHC-P
	K0124E1*	Hu, NHP	FC
	SA011F11*	Ms	FC
MerTK	590H11G1E3	Hu	FC
	2B10C42	Ms	FC
	A311F9G3E1	Hu	WB
P2RY12	S16007D*	Ms	IHC-P, IF, FC
	S16007E*	Hu	FC
P2X7R	1F11	Ms	WB, IHC, IP, FC
Siglec-H	551*	Ms	FC
TMEM119	A16075D	Hu	WB, ICC, FC

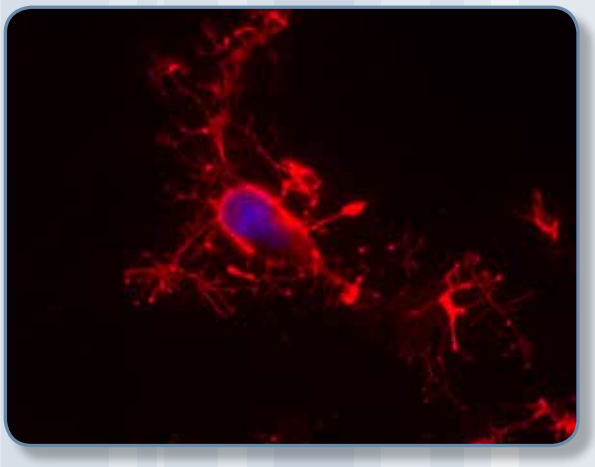
*Multiple conjugated formats available.

Learn more at: biolegend.com/microglia

P2RY12 and TMEM119 are two excellent markers that can be used in immunostaining to distinguish brain resident microglia from other cell types, both those in the brain and circulating blood-derived macrophages. These markers can also be utilized for isolation of a pure population of microglia from the brain.



IHC staining of purified anti-P2RY12 antibody (clone S16007D, magenta) on FFPE mouse brain tissue. Nuclei were counterstained with DAPI (blue).

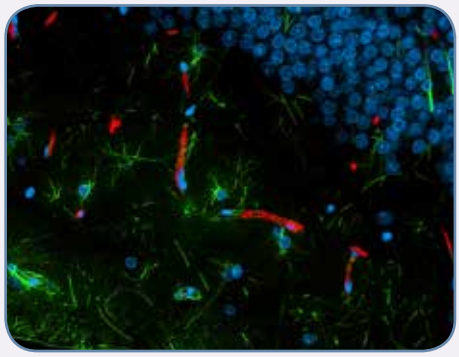


ICC staining of purified anti-TMEM119 (Extracellular) antibody (clone A16075D, red) on HEK293 cells transfected with human TMEM119. Nuclei were counterstained with DAPI (blue).

NeuN

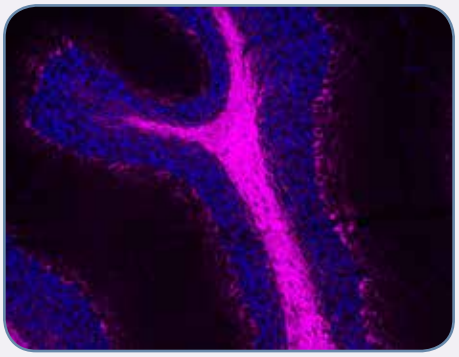
IHC staining of purified anti-FOX3 (NeuN) antibody (clone 1B7) on FFPE mouse brain tissue. The section was counterstained with hematoxylin.

GFAP & Rat Blood-Brain Barrier



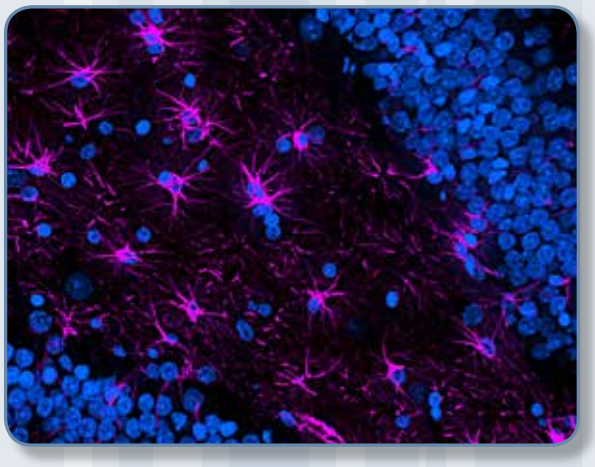
IHC staining of Alexa Fluor® 594 anti-Rat Blood-Brain Barrier antibody (clone SMI 71, red) and Alexa Fluor® 488 anti-GFAP antibody (clone SMI 25, green) on FFPE rat brain tissue. Nuclei were counterstained with DAPI (blue).

Neurofilament H/M, Phosphorylated



IHC staining of Alexa Fluor® 647 anti-Neurofilament H/M, Phosphorylated antibody (clone SMI 310, magenta) on FFPE rat cerebellum tissue. Nuclei were counterstained with DAPI (blue).

Glial fibrillary acidic protein (GFAP) is a member of the intermediate filament (IF) family of proteins, and is commonly known to give cells their form, shape, and function. GFAP is specifically expressed in astrocytes, however, neural stem cells can frequently express this protein as well. Antibodies against GFAP are highly useful, as this protein is widely used to detect and distinguish astrocyte morphology and activity state. For example, reactive astrocytes express higher levels of GFAP than ramified astrocytes.



IHC staining of Alexa Fluor® 647 anti-GFAP antibody (clone SMI 25, magenta) on FFPE rat brain tissue. Nuclei were counterstained with DAPI (blue).

IHC staining of purified anti-GFAP antibody (clone SMI 24) on FFPE mouse brain tissue. The section was counterstained with hematoxylin.

Astrocyte Markers

Specificity	Clone	Reactivity	Application
GFAP	15C7D5D2	Hu	WB, ELISA
	2E1.E9*	Hu, Ms, Rat	WB, IHC-F, ICC, FC
	Poly28294	Hu, Ms, Rat	WB, IHC-P, ICC
	SMI 21	Hu, NHP, Canine	WB, IHC-P, ICC
	SMI 22	Mammalian, Chicken	WB, IHC-P, ICC, ELISA
	SMI 23	Mammalian	WB, IHC-P
	SMI 24	Mammalian	WB, IHC-P
	SMI 25*	Mammalian	WB, IHC-P
	SMI 26	Mammalian, Chicken	WB, IHC-P, ICC, ELISA
S100B	11C12E12	Hu, Ms, Rat	WB

Learn more at: biolegend.com/astrocytes

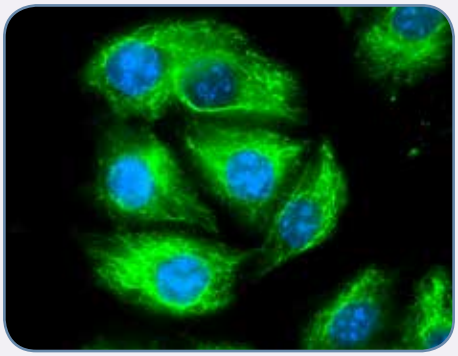
Oligodendrocyte Markers

Specificity	Clone	Reactivity	Application
A2B5	105	Hu, Ms	FC
Myelin Basic Protein (MBP)	P82H9	Hu, Rat	WB, IHC-P
	SMI 94	Mammalian	WB, IHC-P
	SMI 99	Mammalian	WB, IHC-P, ICC, ELISA
Myelin CNPase	SMI 91*	Hu, Ms, Rat	WB, IHC-P
PDGRα	16A1*	Hu	FC
	APA5*	Ms	FC
Adenomatous polyposis coli (APC)	Ali 12-28	Hu	WB
Sox-10	BSB-62	Hu, Ms, Rat	IHC-P
Vimentin	O91D3*	Hu	WB, ICC
	Poly29191	Hu, Ms, Rat	WB, IHC-P, ICC

*Multiple conjugated formats available.

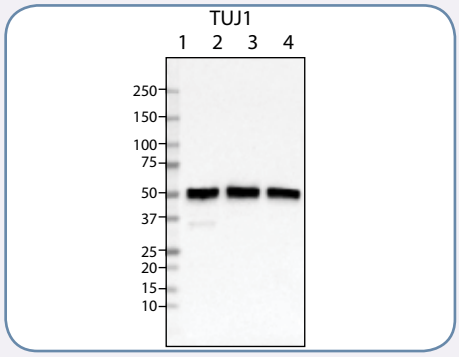
Learn more at: biolegend.com/oligodendrocytes

Vimentin



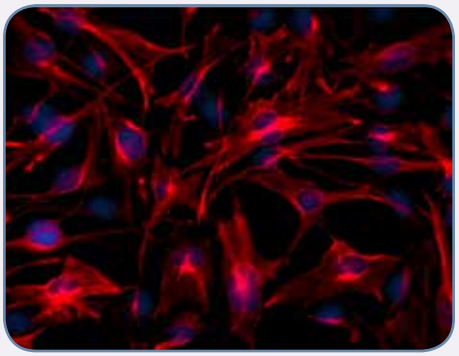
ICC staining of purified anti-Vimentin antibody (Poly29191, green) on A431 cells. Nuclei were counterstained with DAPI (blue).

Tubulin β3



Western blot of purified anti-Tubulin β3 (TUBB3) antibody (clone TUJ1). Lane 1: Molecular weight marker; Lane 2: 20 µg of human brain lysate; Lane 3: 20 µg of mouse brain lysate; Lane 4: 20 µg of rat brain lysate.

GFAP



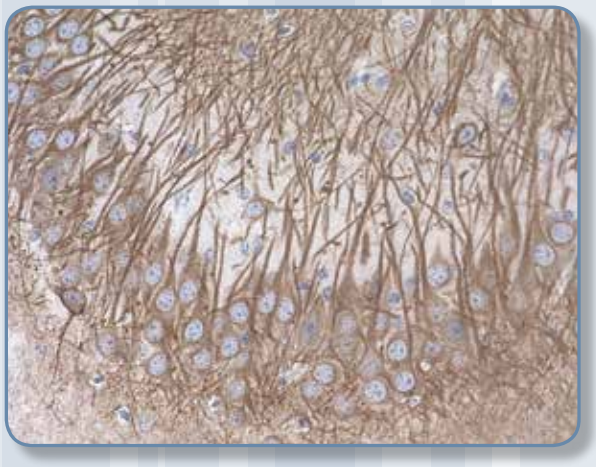
ICC staining of purified anti-GFAP (Cocktail) antibody (clone SMI 22, red) on U251 cells. Nuclei were counterstained with DAPI (blue).

Stem Cell Markers

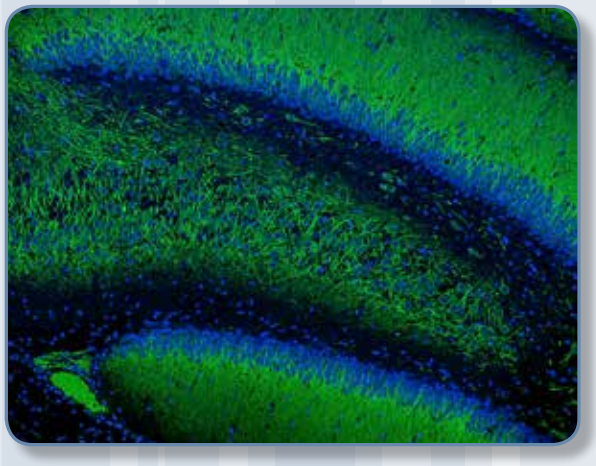
Specificity	Clone	Reactivity	Application
A2B5	105	Hu, Ms	FC
Gli-1	Poly6424	Hu	WB
MAP2	AA6	Mammalian	WB
	Poly18406	Mammalian	WB, IHC-P
	Poly28225	Hu, Ms, Rat	WB, IHC-P
	SMI 52*	Ms, Rat	IHC-P
Nestin	10C2	Hu	WB, IHC-P, ICC, ICFC
	Nestin 20	Hu, Ms	WB, IHC-P, ICC
	Poly18419	Hu	WB, IHC-P, ICC
	Rat-401	Ms, Rat	WB, IHC-P
NFATc2	16A12A31	Ms	WB
NKX2-1 (TTF-1)	14D3A28	Ms	WB
Notch 1	HMN1-12*	Ms	FC
	MHN1-519*	Hu	FC
	mN1A	Hu, Ms	WB, ICFC
	N253/32	Hu, Ms, Rat	WB, IHC-P
Notch 1β	5B6	Hu, Ms, Rat	WB, IHC-P, Direct ELISA
	5C12	Hu, Ms, Rat	IHC-P, Direct ELISA
	6B11/Notch	Hu, Ms, Rat	IHC-P, Direct ELISA
Notch 2	HMN2-35*	Ms	FC
	MHN2-25*	Hu	FC
PAX-6	Poly19013	Mammalian	WB, IHC-P, ICC
Prox1	Poly19252	Hu, Ms, Rat	WB, IHC-P
	W16098A*	Hu	WB, ICC
RUNX1	1C5B16*	Hu, Ms	WB, ICC, IP
SOX2	14A6A34*	Hu, Ms	WB, ICC, FC
	Poly6308	Hu	WB
SSEA-1	FH6	Hu	FC
	HI98*	Hu, NHP	FC
	MC-480*	Hu, Ms	FC
	W6D3*	Hu	FC
SSEA-4	MC-813-70*	Hu, Ms, NHP	FC
STAT3	15H2B45*	Hu	ICFC
	4G4B45*	Hu, Ms	ICC
	P83B5*	Hu, Ms	WB, ChIP
STAT3 Phospho (Ser727)	A16089B*	Hu	WB, ICFC, ChIP
STAT3 Phospho (Tyr705)	13A3-1*	Hu, Ms	ICFC
	A16002B*	Hu	WB, ICFC, ChIP

*Multiple conjugated formats available.

Microtubule-associated protein 2, also known as MAP2, is a neuron-specific cytoskeletal protein involved in microtubule assembly. MAP2 is highly enriched in dendrites. Antibodies against this protein serve as a great marker for visualization of neuronal cell morphology, dendritic process detection and integrity assessment, and distinction of axon from dendrites.

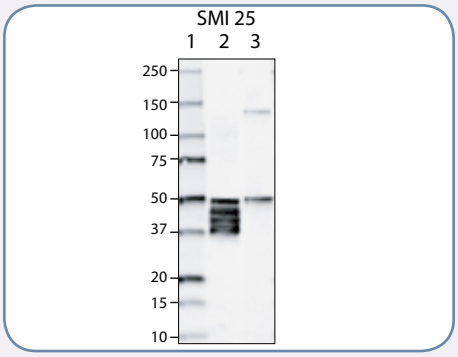


IHC staining of HRP anti-MAP2 antibody (clone SMI 52) on FFPE rat brain tissue. The section was counterstained with hematoxylin and bluing solution.



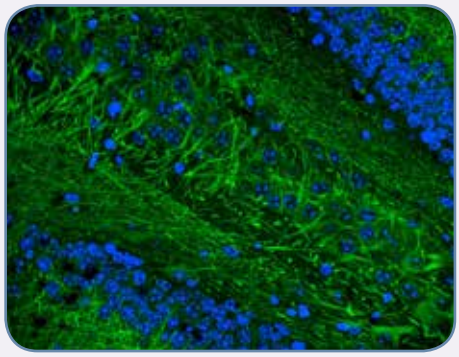
IHC staining of Alexa Fluor® 488 anti-MAP2 antibody (clone SMI 52, green) on FFPE rat brain tissue. Nuclei were counterstained with DAPI (blue).

GFAP



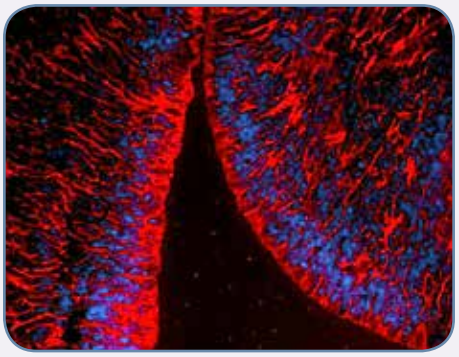
Western blot of HRP anti-GFAP (clone SMI 25). Lane 1: Molecular weight marker; Lane 2: 20 µg of human brain lysate; Lane 3: 20 µg of rat brain lysate.

MAP2



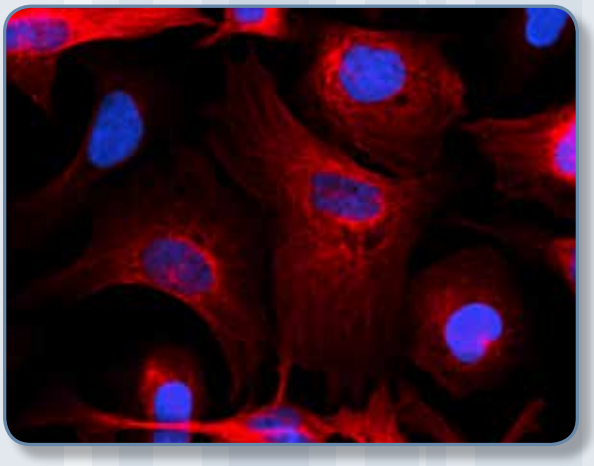
IHC staining of Alexa Fluor® 488 anti-MAP2 antibody (clone SMI 52, green) on FFPE mouse brain tissue. Nuclei were counterstained with DAPI (blue).

Nestin

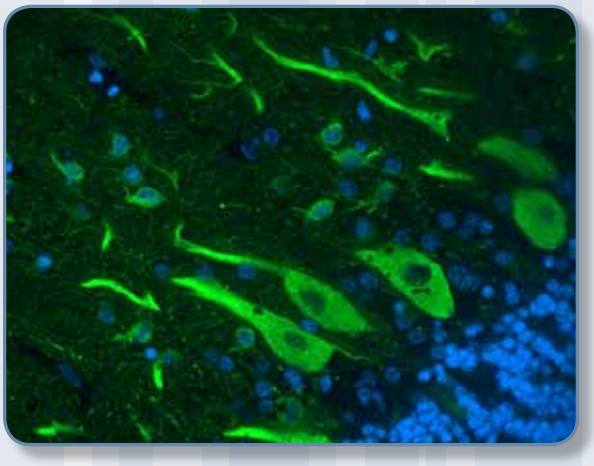


IHC staining of Alexa Fluor® 594 anti-Nestin antibody (clone Rat-401, red) on FFPE Embryonic Day 15 mouse brain tissue. Nuclei were counterstained with DAPI (blue).

Tubulins are the main constituents of microtubules, and are the major components of the cytoskeleton essential for intracellular transport. Class III β-tubulin, also known as β3-tubulin, is encoded by the TUBB3 gene, and is abundantly expressed in neurons. Antibodies against β3-tubulin are commonly used in IHC or ICC, and serve as ideal neuronal marker antibodies to distinguish these cells from other glial cell types.



ICC staining of purified anti-Tubulin Beta 3 (TUBB3) antibody (clone AA10, red) on NTERA-2 cells. Nuclei were counterstained with DAPI (blue).



IHC staining of Alexa Fluor® 488 anti-Tubulin β3 (TUBB3) antibody (clone TUJ1, green) on FFPE normal human cerebellum tissue. Nuclei were counterstained with DAPI (blue).

Endothelial Cell Markers

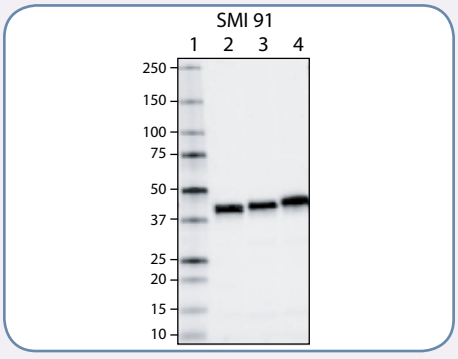
Specificity	Clone	Reactivity	Application
Rat Blood-Brain Barrier	SMI 71*	Rat	IHC-P
Podoplanin	8.1.1*	Ms	FC
	D2-40	Hu	WB, IHC-P
	NC-08*	Hu	FC, ICC

Cytoskeletal Markers

Specificity	Clone	Reactivity	Application
α-Smooth Muscle Actin	1A4	Hu, Rat, Chicken	WB, IHC-P
α-Skeletal Muscle Actin	Alpha Sr-1	Hu, Ms, Rat, Rb, Chicken	IHC-P
β-actin	2F1-1*	Hu, Ms, Rat	WB, ICC
	Poly6221	Hu, Ms, Rat	WB, ICC
	W16197A*	Hu, Ms, Rat, Zebrafish	WB
α-I Spectrin	17C7	Hu, Ms, Rat	WB, ICC
α-II Spectrin	D8B7	Hu	WB, IHC-P
α-Spectrin (SPTAN1)	1C2B10C3C11	Hu	WB, ELISA
	2A5A7H8	Hu	WB, ELISA
	8B8D10F11	Hu	WB, ELISA
α-Tubulin	10D8*	Hu, Ms, Rat	WB, ICC
	AA13	Mammalian	WB, ICC
	TU-01	All Species	WB, ICC
α-Tubulin (TUBA8)	P82D6D7	Hu	WB, ICC
β-Tubulin	O95C1	Hu, Ms	WB
	TU27/Tubulin	Hu, Ms, Hamster, NHP	WB, ICC
β2B-Tubulin (TUBB2B)	6B1/Tubulin	Mammalian	WB, ICC
	7B9	Mammalian	WB, ICC
β3-Tubulin (TUBB3)	AA10*	Hu, Ms, Rat	WB, IHC-P, IHC-F, ICC, ICFC
	Poly18020	Hu, Ms, Rat	WB, IHC-P, ICC
	TUJ1*	Hu, Ms, Rat	WB, IHC-P
β3-Tubulin (TUBB3), Depolymerized	SMI 61	Mammalian	WB, IHC-P, ICC, ELISA
β3-Tubulin (TUBB3), Polymerized	SMI 62	Mammalian	WB, ICC, ELISA
γ-Tubulin	14C11	Hu, Ms, Rat	WB, ICC
	Poly6209	Hu, Ms	WB, ICC
Non-muscle Myosin Heavy Chain II-A	Poly19098	Hu, Ms, Rat	WB, ICC
Non-muscle Myosin Heavy Chain II-B	Poly19099	Hu, Ms, Rat	WB, ICC
Myosin Heavy Chain	H11	Mammalian	WB, ICC, IP
	Poly6212	Hu, Rat	ICC

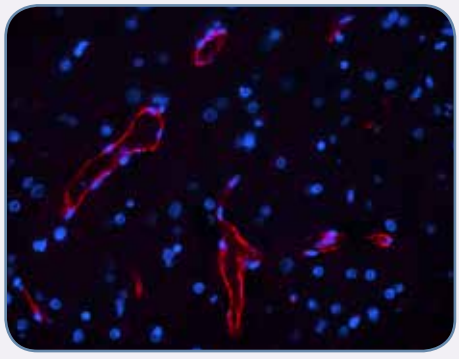
*Multiple conjugated formats available.

Myelin CNPase



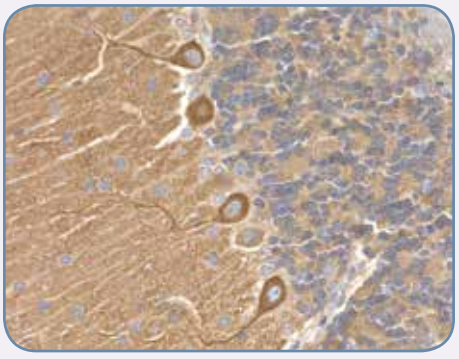
Western blot of HRP anti-Myelin CNPase antibody (clone SMI 91). Lane 1: Molecular weight marker; Lane 2: 20 µg of human brain lysate; Lane 3: 20 µg of mouse brain lysate; Lane 4: 20 µg of rat brain lysate.

Rat Blood-Brain Barrier



IHC staining of Alexa Fluor® 594 anti-Rat Blood-Brain Barrier antibody (clone SMI 71, red) on FFPE rat brain tissue. Nuclei were counterstained with DAPI (blue).

Alpha-II Spectrin



IHC staining of anti-Alpha-II Spectrin antibody (clone D8B7) on FFPE rat brain tissue. The section was counterstained with hematoxylin.

Organelle Markers

Organelle marker antibodies are an important research tool in the study of biological processes. They can be utilized to evaluate organelle morphology and cell health. For example, antibodies against mitochondrial targets may be used to detect fragmented mitochondria in damaged cells. Organelle markers also allow assessment of distribution, subcellular localization, and co-localization of target proteins. BioLegend has a growing offering of specific antibodies suitable for detection of various organelles.

Autophagosome Markers

Specificity	Clone	Reactivity	Application
ATG5	177.19*	Hu, Ms, Rat	WB, IHC-P, ICC
ATG17	W16188A	Hu	WB
Beclin-1	O93F3*	Hu, Ms, Rat	WB
LC3	A15143K	Hu, Ms	IHC-P, ICC
p62	1B5.H9	Hu	WB, IHC-P
	Poly6477	Hu	WB
Rab7A	W16034A*	Hu, Ms, Rat	WB, ICH-P, ICC, Direct ELISA
Ubiquitin	P4G7	All species	WB
Ubiquitin, 50-65 (bound)	3-39	Mammalian	WB, IHC-P, IP, ELISA
Ubiquitin, 64-76 (free.bound)	5-25	Mammalian	WB, IHC-P, ELISA, EM

Endoplasmic Reticulum

Specificity	Clone	Reactivity	Application
ATF6	W17028A	Hu	WB, ICC
ATF6β	W17035A	Hu	WB, ICC
GRP94 (HSP90B1)	Poly6499	Hu	WB
p97/VCP	4G9	Hu	WB
Pancortin	K96/7	Ms, Rat	IHC-P

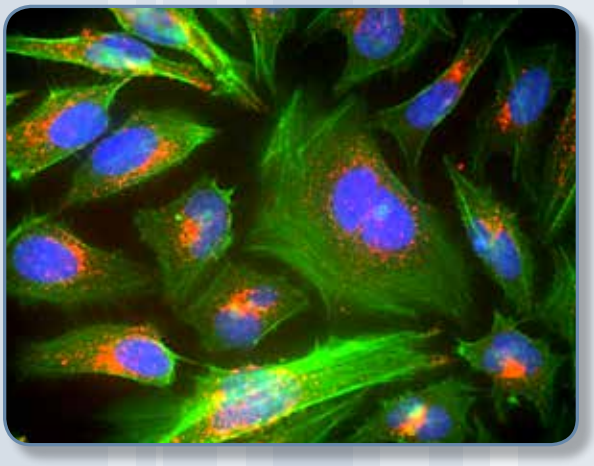
Endosomal Markers

Specificity	Clone	Reactivity	Application
Dynamin-1	P83G4B6	Hu, Ms, Rat	WB, IHC-P
Flotillin-1	W16108A	Hu, Ms, Rat	WB
Rab7A	W16034A	Hu, Ms, Rat	WB, IHC-P, ICC, Direct ELISA

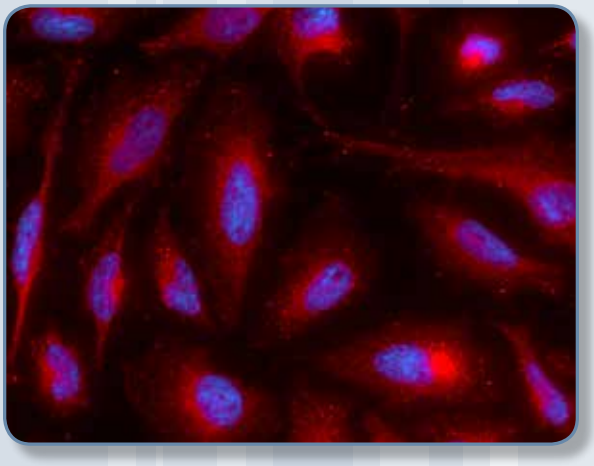
Lysosomal Markers

Specificity	Clone	Reactivity	Application
Cathepsin A	15D2C93	Hu	WB
Cathepsin B	15D10C39	Hu	WB
Cathepsin D	16E12C58	Hu	WB
LAMP1 (CD107a)	H4A3*	Hu, NHP	WB, ICC, FC
LAMP2 (CD107b)	M3/84*	Ms	ICC, FC
	H4B4*	Hu	WB, IHC-P, ICC, FC

*Multiple conjugated formats available.

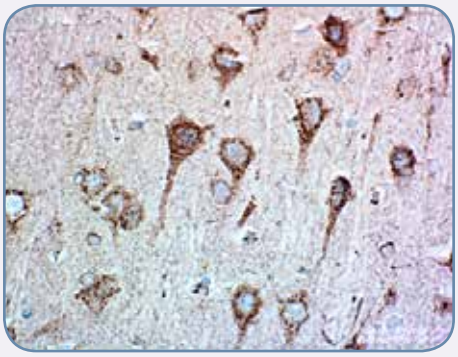


ICC staining of purified anti-LAMP-1 antibody (clone H4A3, red) on HeLa cells, counterstained with Flash Phalloidin™ Green 488 (green) and DAPI (blue) to visualize actin filaments and nuclei, respectively.



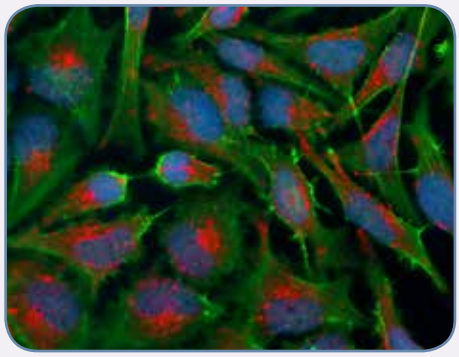
ICC staining of purified anti-ATF6β antibody (clone W17035A, red) on HeLa cells. Nuclei were counterstained with DAPI (blue).

Sortilin



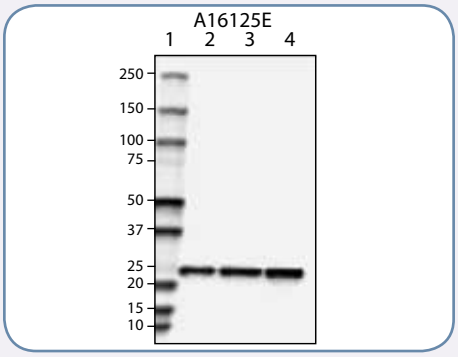
IHC staining of purified anti-Sortilin antibody (clone W16078A) on FFPE rat brain tissue. The section was counterstained with hematoxylin.

LAMP2



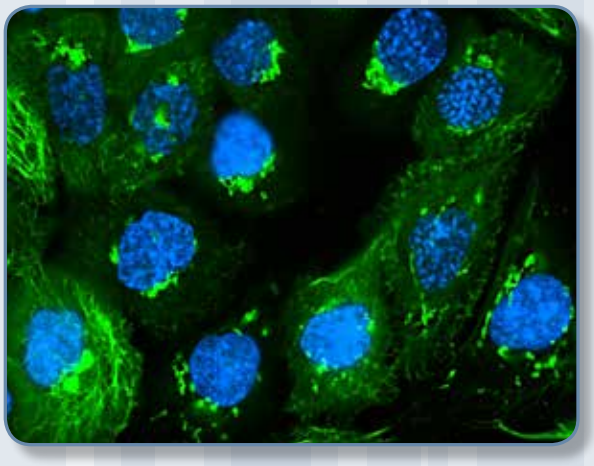
ICC staining of purified anti-LAMP-2 antibody (clone H4B4, red) on HeLa cells, counterstained with Flash Phalloidin™ Green 488 (green) and DAPI (blue) to visualize actin filaments and nuclei, respectively.

DJ-1 (PARK7)

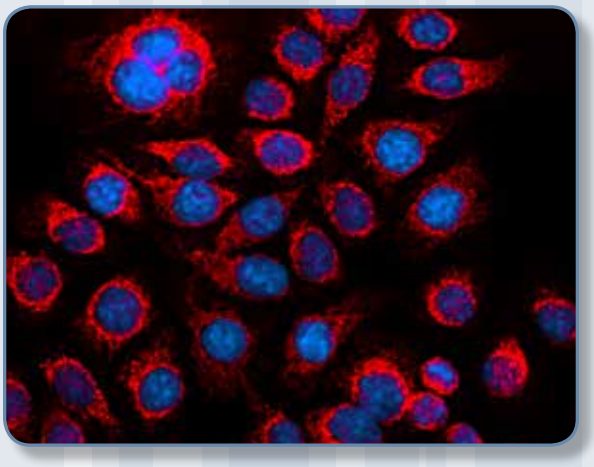


Western blot of HRP anti-DJ-1 (PARK7) antibody (clone A16125E). Lane 1: Molecular weight marker; Lane 2: 20 µg of recombinant human DJ-1 (PARK7) protein; Lane 3: 20 µg of normal human brain lysate; Lane 4: 20 µg of Parkinson's disease brain lysate.

Visualize and check for protein co-localization with phagosomes, endosomes, lysosomes, ER, golgi, and mitochondria using antibodies specific for LC3, Rab7A, LAMP1, ATF6, giantin, and cytochrome C, respectively.



ICC staining of purified anti-GPP130 antibody (Poly19238, green) on A431 cells. Nuclei were counterstained with DAPI (blue).



ICC staining of purified anti-cytochrome c antibody (clone 6H2.B4, red) on HeLa cells. Nuclei were counterstained with DAPI (blue).

Golgi Markers

Specificity	Clone	Reactivity	Application
Giantin	Poly19087*	Hu, Ms, Rat, NHP	WB, ICC
	Poly19243	Hu, Rodent, NHP	WB, ICC
GPP130	Poly19238	Hu, Rodent, NHP	WB, ICC, IP
Sortilin	W16078A	Hu, Rat	WB, IHC-P

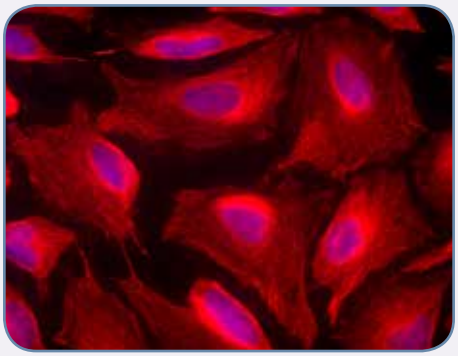
Mitochondrial Markers

Specificity	Clone	Reactivity	Application
BAP37	Poly6118	Hu, Ms	WB, ICC
Cytochrome C	6H2.B4*	Hu, Ms, Rat	WB, ICC, IP, ICFC
DJ-1 (PARK7)	A16125E*	Hu	WB, IHC-P, Direct ELISA
	E2.19	Human, Zebrafish	WB, IHC-P, ELISA
	Poly18081	Hu, Ms, Rat	WB, IHC-P, ELISA
GRP75 (Mortalin)	N52A/42	Hu. Ms, Rat	WB, IHC-P
HSD17B10	5F3	Hu	ICC
HSP60	P83G8*	Hu, Ms, Rat	WB, ICC
LRRK2	8G10	Hu, Ms, Rat	WB, ELISA
	MC.028.83.76.242	Hu	IHC-P, Direct ELISA
Parkin	Prk8	Hu, Ms	WB, ELISA
	Prk109	Hu, Ms	WB, ELISA
PINK1	DU46-1.1	Hu	WB, IHC-P, Direct ELISA
Mitofusin-1	1G3.B6	Hu, Rat	WB, IHC-P
Mitofusin-2	N153/5	Ms, Rat	WB, IHC-P
TFAM	18G102B2E11*	Hu	WB, IHC-P
UQCRC1	O91G2	Hu, Ms	WB, ICC
	O91G6	Hu	WB, ICC
VDAC1	N152B/23	Hu, Ms, Rat	WB, IHC-P

*Multiple conjugated formats available.

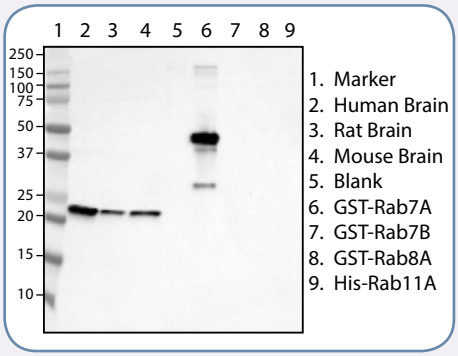
Download or request a free copy of our Autophagy poster to learn more about autophagic and lysosomal degradation pathways: biolegend.com/literature

ATG5



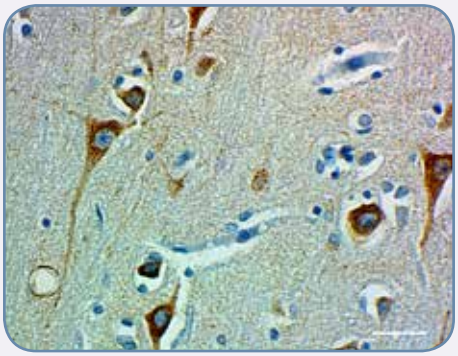
ICC staining of purified anti-ATG5 antibody (clone 177.19, red) on HeLa cells. Nuclei were counterstained with DAPI (blue).

Rab7A



Western blot of anti-Rab7A antibody (clone W16034A). M: Molecular weight marker; brain lysates: 20 µg; recombinant proteins: 10 ng.

VDAC1



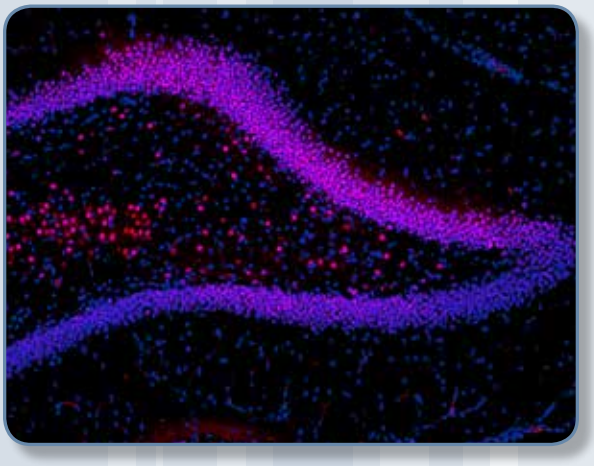
IHC staining of Biotin anti-VDAC1 antibody (clone N152B/23) on FFPE human brain tissue. The slide was counterstained with hematoxylin.

Nuclear Markers

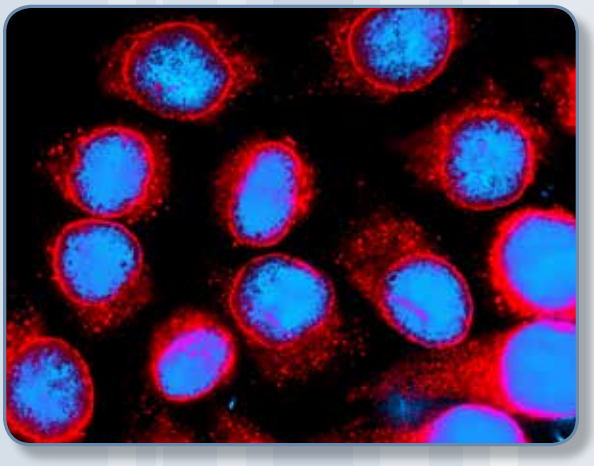
Specificity	Clone	Reactivity	Application
Fibrillarin	38F3	Hu, Rat, Drosophila, *S. pombe*, *C. elegans*, plants	WB, ICC
FBXO7	W16207A	Hu	WB, ICC
Lamin A	Poly6135	Hu	WB, ICC
MECP2	N227/21	Hu, Ms, Rat	IHC-P, ICC
MINA	1H6B44	Hu	WB, ICC
NF-κB p65	14G10A21*	Hu	WB, IP, ICFC
	Poly6226*	Hu, Ms, Rat	WB, ICC, ChIP
NFATc1	7A6*	Hu, Ms, Rat	WB, ICC, ICFC, ChIP
NFATc2	16A12A31	Hu, Ms	WB
NR1D2	W15136A*	Hu, Ms	WB, ICC
NR4A2	10A4B48	Ms	WB
NR5A2	1D12B67	Hu	WB
Nuclear Pore Complex Proteins	MAb414*	Vertebrate, Xenopus, Yeast	WB, ICC
NUP153	QE5*	Eukaryote	WB, ICC
Nur77	1E10A15*	Hu	WB, ICC
PCNA	PC10*	Hu, Ms, Rat	WB, IHC-P, ICC, ICFC
TFEB	A17106A	Hu, Ms, Rat	WB

*Multiple conjugated formats available.

Antibodies against nuclear markers allow identification and morphological assessment of specific nuclear components such as nuclear envelope, pores, and lamina. They also enable individual cell identification and positioning, and follow cell fate in cellular processes such as division and apoptosis.

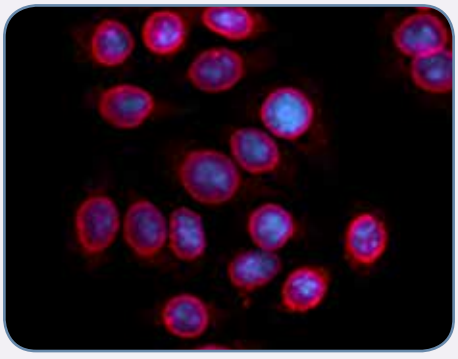


IHC staining of Alexa Fluor® 594 anti-MECP2 antibody (Clone N227/21, red) on FFPE mouse hippocampus tissue. Nuclei were counterstained with DAPI (blue).



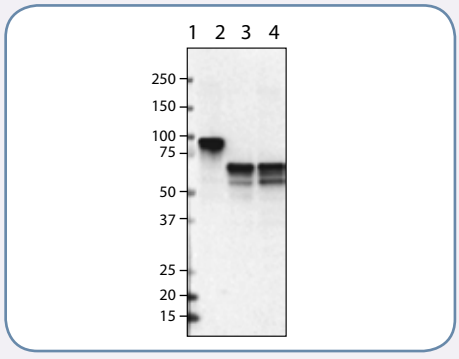
ICC staining of Alexa Fluor® 488 anti-Nuclear Pore Complex Proteins antibody (Clone Mab414, red) on HeLa cells. Nuclei were counterstained with DAPI (blue).

NUP153



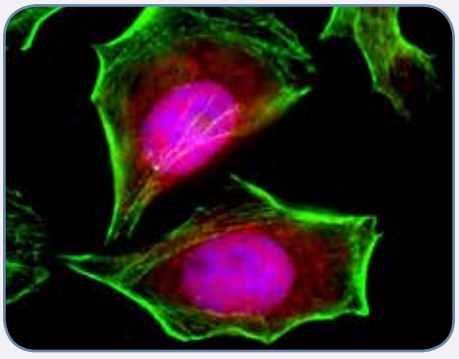
ICC staining of Alexa Fluor® 594 anti-NUP153 antibody (clone QE5, red) on HeLa cells. Nuclei were counterstained with DAPI (blue).

FBXO7



Western blot of purified anti-FBXO7 antibody (clone A16207A). Lane 1: Molecular weight marker; Lane 2: 3 ng of GST-tagged human recombinant FBXO7; Lane 3: 20 µg of HeLa cell lysate; Lane 4: 20 µg of SH-SY5Y cell lysate.

STAT3



ICC staining of Alexa Fluor® 594 conjugated STAT3 antibody (clone 4G4B45, red) and Alexa Fluor® 488 Phalloidin (green) on HeLa cells. Nuclei were counterstained with DAPI (blue).

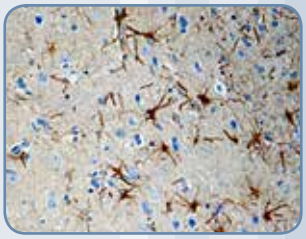
Antibody Sampler Kit

Description	Specificity	Clones	Reactivity	Application
Glial Cell Marker Antibody Sampler Kit	P2RY12, CX3CR1, GFAP, Myelin CNPase, Myelin Basic Protein	S16007D, 8E10.D9, SMI 24, SMI 91, P82H9	Hu, Ms, Rat	WB, IHC-P

Antibody Sampler Kit for Neuroscience Research

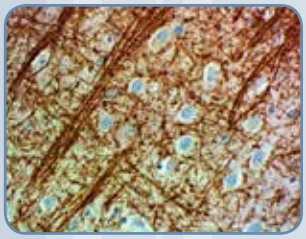
BioLegend offers a variety of antibody sampler kits that provide an affordable solution for sampling of reagents to analyze multiple parts of a pathway of the Central Nervous System.
The Glial Cell Antibody Sampler Kit contains antibodies for the detection of key glial cell markers CX3CR1, GFAP, Myelin CNPase, Myelin Basic Protein, and P2RY12. These markers can be used in IHC and WB applications to assess protein expression levels or identification of microglia, astrocytes, and oligodendrocytes.

CX3CR1



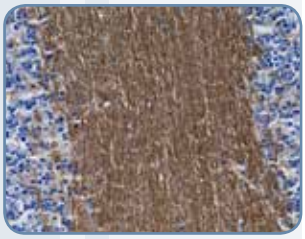
IHC staining of anti-CX3CR1 antibody (clone 8E10.D9) on FFPE normal human brain tissue. The section was counterstained with hematoxylin and bluing solution.

Myelin Basic Protein



IHC staining of purified anti-Myelin Basic Protein antibody (clone SMI 94) on FFPE human brain tissue. The section was counterstained with hematoxylin.

Myelin CNPase



IHC staining of purified anti-Myelin CNPase antibody (clone SMI 91) on FFPE rat brain tissue. The section was counterstained with hematoxylin.

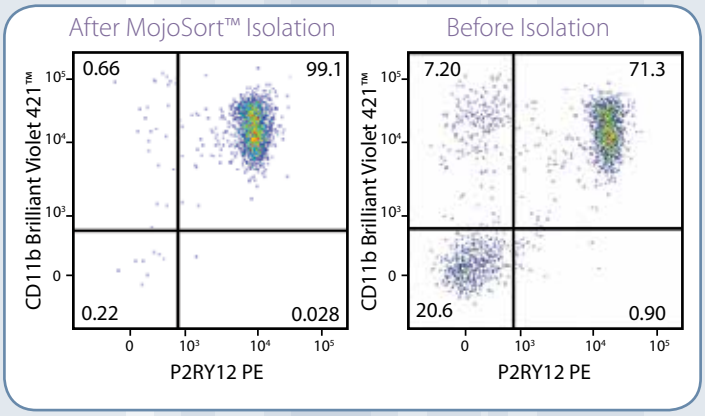
MojoSort™ Magnetic Cell Separation System

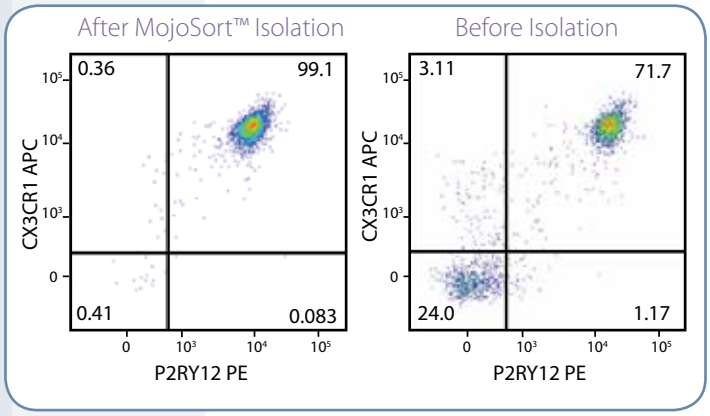
BioLegend's MojoSort™ Cell Separation System is ideal for fast and easy isolation and purification of cells from heterogeneous populations using magnetic beads. MojoSort™ is compatible for use with multiple magnetic separation platforms and can be used for positive or negative cell separation.

Learn more about MojoSort™ at: biolegend.com/mojosort

MojoSort™ Products

Description	Reactivity
MojoSort™ Human CD45 Nanobeads	Hu
MojoSort™ Mouse CD45 Nanobeads	Ms
MojoSort™ Mouse CX3CR1 Selection Kit	Ms
MojoSort™ Mouse P2RY12 Selection Kit	Ms





MojoSort™ Mouse P2RY12 Selection Kit. A single cell suspension from adult C57BL/6 brain was prepared using Trypsin digestion and 70/37/30% percoll gradient for positive selection of P2RY12$^+$ cells using the MojoSort™ Mouse P2RY12 Selection Kit. Cells were stained with either anti-mouse P2RY12 (clone S16007D) PE and anti-mouse CD11b (clone M1/70) Brilliant Violet 421™ or anti-mouse CX3CR1 (clone SA011F11) APC. Dead cells were excluded by 7-AAD.

Ancillary Reagents

Buffers	Antigen Retrieval Systems	HRP Detection Reagents
AEC Substrate Buffer	Retrieve-All Antigen Unmasking System 1: Universal, 1X	AEC Chromogen Concentrate
Antibody Diluent Buffer	Retrieve-All Antigen Unmasking System 1: Universal, 10X	Boost DAB Enhancer, 50X
Avidin/Biotin Blocking System	Retrieve-All Antigen Unmasking System 1: Universal, 100X	DAB Chromogen Concentrate
Capillary Action Buffer 1	Retrieve-All Antigen Unmasking System 2: Basic, 1X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species)
Capillary Action Buffer 2/3	Retrieve-All Antigen Unmasking System 2: Basic, 10X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species)
DAB Substrate Buffer	Retrieve-All Antigen Unmasking System 2: Basic, 100X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, AEC)
DAB Substrate Buffer with Stabilizer	Retrieve-All Antigen Unmasking System 3: Acidic, 1X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, AEC)
Normal Serum Block	Retrieve-All Antigen Unmasking System 3: Acidic, 10X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB)
PBS, 10X Concentrate	Retrieve-All Antigen Unmasking System 3: Acidic, 100X	Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB)
Peroxide Blocking Reagent		Ultra Streptavidin (USA) HRP Detection Kit (Murine)
Sodium Citrate H.I.E.R., 1X		Ultra Streptavidin (USA) HRP Detection Kit (Murine, DAB)
Tris-Buffered Saline 20X (1.0 M)		Ultra Streptavidin (USA) HRP Detection Kit (Rabbit, DAB)
Tris-Buffered Saline 20X (1.0 M) w/ Tween 20		

To learn more about microscopy reagents, visit: biolegend.com/microscopy

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