

# Neuroscience

Research Products

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BioLegend is ISO 9001:2008 and ISO 13485:2003 Certified



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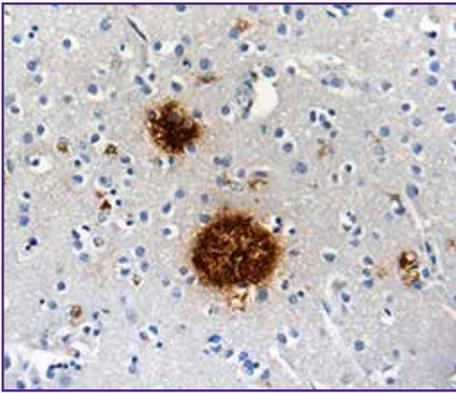
World-Class Quality | Superior Customer Support | Outstanding Value

Unlocking the biology of the brain is a research imperative that has garnered much attention from public and private entities in recent years. From the National Football League to the U.S. Department of Defense, traumatic brain injury is being heavily investigated. In addition, the BRAIN Initiative and EU Initiative ([humanbrainproject.eu](http://humanbrainproject.eu)) are focused on innovative research and technology that increases our understanding of the brain. Neurodegenerative diseases already constitute a public health and economic crisis, and as the population ages, the urgent need for better treatments for these diseases is intensified.

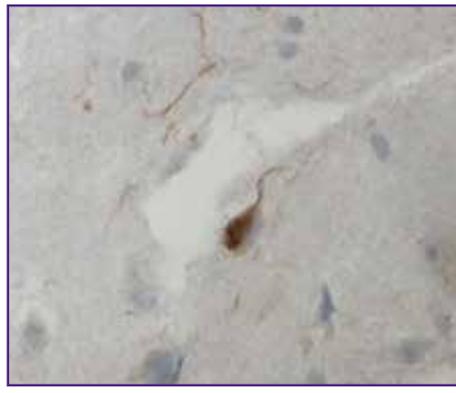
With the acquisition of the Covance antibody product portfolio, BioLegend signaled its commitment to enabling legendary discovery within the neuroscience research community. BioLegend is making further investments in the portfolio, becoming a leading provider of reagents known for quality and innovation, and helping scientists advance the understanding of brain biology, interrogate their pathways, and identify potential biomarkers that may improve the success of clinical programs for neurodegenerative diseases.

## Protein Aggregation

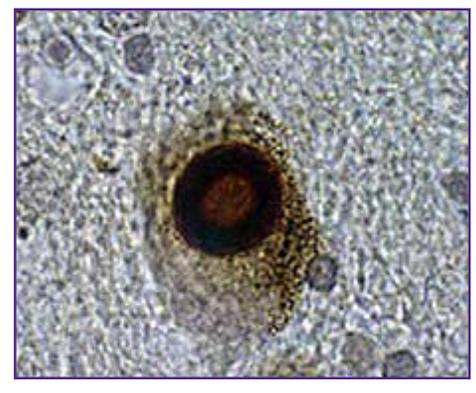
Protein aggregation is a hallmark of neurodegenerative disease pathology (e.g. beta-amyloid plaques in Alzheimer's disease, Lewy bodies in Parkinson's disease, etc). Post-translational modification of key proteins is known to be a critical factor in the pathways that regulate formation, deposition and propagation of these aggregates. BioLegend offers a portfolio of products that set the standard for quality, allowing researchers to detect native and modified forms of key proteins in a wide range of applications.



Staining of  $\beta$ -Amyloid, 1-42 (Clone 12F4) on formalin fixed paraffin embedded human Alzheimer's brain.



Strong staining of Tau, 157-168 (Clone 2G9.F10) on formalin-fixed paraffin-embedded human Alzheimer's brain.



Immunostaining of a Lewy body in a substantia nigra neuron using mAb clone 4D6, which reacts with human, mouse, and rat  $\alpha$ -Synuclein.

### APP/ $\beta$ -Amyloid Antibodies

Description	Clone	Format	Size	Cat. No.
$\beta$ -Amyloid	Poly18058	Purified	50 $\mu$ g	805801
$\beta$ -Amyloid	Poly18058	Biotin	50 $\mu$ g	805803
$\beta$ -Amyloid	Poly18268	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	826801   826802   826803
$\beta$ -Amyloid, 1-8	2H4	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	805301   805302   805303
$\beta$ -Amyloid, 1-8	1E11	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	805201   805202   805203
$\beta$ -Amyloid, 1-10	20.1	Purified	200 $\mu$ l   1 mL	806201   806202
$\beta$ -Amyloid, 1-11	NAB 228	Ascites	200 $\mu$ l	835101
$\beta$ -Amyloid, 1-16	6E10	Ascites	200 $\mu$ l   500 $\mu$ l   1 mL	803015   803016   803017
$\beta$ -Amyloid, 1-16	6E10	Alexa Fluor <sup>®</sup> 488	200 $\mu$ l	803013
$\beta$ -Amyloid, 1-16	6E10	Biotin	200 $\mu$ l   500 $\mu$ l   1 mL	803007   803008   803009
$\beta$ -Amyloid, 1-16	6E10	HRP	200 $\mu$ l	803011
$\beta$ -Amyloid, 1-16	6E10	LEAF <sup>™</sup>	1 mL	803006
$\beta$ -Amyloid, 1-16	6E10	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	803001   803002   803003
$\beta$ -Amyloid, 1-16	M3.2	Biotin	200 $\mu$ l   1 mL	805703   805704

Description	Clone	Format	Size	Cat. No.
$\beta$ -Amyloid, 1-16	Poly8029	Purified	50 $\mu$ g	802901
$\beta$ -Amyloid, 1-16	M3.2	Purified	200 $\mu$ l   1 mL	805701   805702
$\beta$ -Amyloid, 1-38	7-14-4	Purified	50 $\mu$ g	808601
$\beta$ -Amyloid, 1-38	7-14-4	Biotin	50 $\mu$ l	808603
$\beta$ -Amyloid, 1-40	11A50-B10	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	805401   805402   805403
$\beta$ -Amyloid, 1-40	11A50-B10	Biotin	200 $\mu$ l   500 $\mu$ l   1 mL	805404   805405   805406
$\beta$ -Amyloid, 1-40	11A50-B10	HRP	200 $\mu$ l	805407
$\beta$ -Amyloid, 1-42	12F4	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	805501   805502   805503
$\beta$ -Amyloid, 1-42	12F4	Biotin	200 $\mu$ l   500 $\mu$ l   1 mL	805504   805505   805506
$\beta$ -Amyloid, 1-42	12F4	HRP	200 $\mu$ l	805507
$\beta$ -Amyloid, 1-43	9C4/ Amyloid	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	805601   805602   805603
$\beta$ -Amyloid, 1-43	9C4/ Amyloid	Biotin	200 $\mu$ l   500 $\mu$ l   1 mL	805604   805605   805606
$\beta$ -Amyloid, 17-24	4G8	Ascites	200 $\mu$ l   500 $\mu$ l   1 mL	800709   800710   800711
$\beta$ -Amyloid, 17-24	4G8	Purified	200 $\mu$ l   500 $\mu$ l   1 mL	800701   800702   800703

Description	Clone	Format	Size	Cat. No.
β-Amyloid, 17-24	4G8	Biotin	200 µl   500 µl 1 mL	800704   800705 800706
β-Amyloid, 17-24	4G8	HRP	200 µl	800707
β-Amyloid Pyroglutamyl (Glu3)	337.48	Purified	100 µl	822301
β-Amyloid, x-38	BA1-13	Purified	50 µg	825101
β-Amyloid, x-40	139-5	Biotin	50 µl	805903
β-Amyloid, x-40	139-5	Purified	50 µg	805901
β-Amyloid, x-40	29-6	Purified	100 µl	825201
β-Amyloid, x-42	1-11-3	Biotin	50 µl	812103
β-Amyloid, x-42	1-11-3	Purified	50 µg	812101
β-Amyloid, x-42	BA3-9	Purified	50 µg	825301
Amyloid Fibril (pan reactive)	B10AP	Purified	50 µl	812201
APP	LN27	Purified	200 µl   500 µl 1 mL	800901   800902 800903
APP C-Terminal Fragment	C1/6.1	Purified	200 µl   1 mL	802801   802802
APP C-Terminal Fragment	Poly8250	Purified	50 µg	825001
APP, 61-77	D3B10	Purified	200 µl   500 µl 1 mL	806101   806102 806103
APP, 573-596	1G6	Biotin	200 µl	806004
APP, 573-596	1G6	Purified	200 µl   500 µl 1 mL	806001   806002 806003
sAPPα	Poly8135	Purified	50 µg	813501
sAPPβ	Poly8134	Purified	50 µg	813401

### APP/β-Amyloid Recombinant Proteins

Description	Size	Cat. No.
Recombinant Human β-Amyloid Peptide (1-40)	1 mg	843701
Recombinant Human β-Amyloid Peptide (1-42)	1 mg	843801
Recombinant Human β-Amyloid Scrambled Peptide (1-40)	500 µg	843901
Recombinant Human β-Amyloid Scrambled Peptide (1-42)	500 µg	844001
Recombinant Human APP751	25 µg	842601
Recombinant Human APP770	25 µg	843201
Recombinant Human sAPPbeta (APP751 isoform)	20 µg	843501

### β-Amyloid ELISAs

Description	Size	Cat. No.
BetaMark™ β-Amyloid x-40 ELISA Kit (Chemiluminescent)	1 kit	842101
BetaMark™ β-Amyloid x-40 ELISA Kit (TMB)	1 kit	842301
BetaMark™ β-Amyloid x-42 ELISA Kit (Chemiluminescent)	1 kit	842201
BetaMark™ β-Amyloid x-42 ELISA Kit (TMB)	1 kit	842401

### α-Synuclein Antibodies

Description	Clone	Format	Size	Cat. No.
α-Synuclein	Syn 204	Ascites	200 µl	838201
α-Synuclein	Syn303	Purified	100 µl	824301
α-Synuclein	4D6	Purified	200 µl   500 µl 1 mL	834301   834302 834303
α-Synuclein Phospho (Ser129)	P-syn/81A	Purified	100 µl	825701
α-Synuclein, 103-108	4B12/ Synuclein	Purified	200 µl   500 µl 1 mL	807801   807802 807803
α-Synuclein, 115-121	LB509	Purified	200 µl   500 µl 1 mL	807704   807705 807706
α-Synuclein, 115-121	LB509	Purified	200 µl   500 µl 1 mL	807701   807702 807703
Synuclein-α, Nitrated	Syn514	Ascites	200 µl	838901
Synuclein-α/β, 130-140	Syn 202	Ascites	200 µl	836601
Synuclein-α/β, Nitrated	Syn12	Ascites	200 µl	838801

### α-Synuclein ELISAs

Description	Size	Cat. No.
Human α-Synuclein ELISA Kit	1 kit	844101

### Tau Antibodies

Description	Clone	Format	Size	Cat. No.
Tau	Poly8296	Purified	50 µg	829601
Tau	Tau 2	Purified	100 µl   500 µl	806701   806702
0N Tau	3H6.H7	Purified	100 µl	823801
1N Tau	4H5.B9	Purified	100 µl	823901
2N Tau	71C11	Purified	100 µl   500 µl	816801   816802
4R Tau	5F9	Purified	100 µl	823701
Tau, 1-100	43D	Purified	100 µl   500 µl	816601   816602
Tau, 6-18	Tau 12	Purified	100 µl   500 µl	806501   806502
Tau, 20-35	TAU-13	Ascites	500 µl	835201
Tau, 157-168	2G9.F10	Purified	100 µl	824601
Tau, 185-195	39E10	Purified	100 µl	814301
Tau, 185-195	77E9	Purified	100 µl	814401
Tau, 210-230	Tau 5	Purified	200 µl   500 µl 1 mL	806401   806402 806403
Tau, 267-278	5C7	Purified	100 µl	814501
Tau, 316-355	77G7	Purified	100 µl   500 µl	816701   816702
Tau, x-421	C3	Purified	200 µl   500 µl 1 mL	806301   806302 806303
Tau, 404-421	Tau46	Purified	200 µl   500 µl 1 mL	806601   806602 806603
Tau Dimethyl (Lys281)	1C9.G6	Purified	100 µl	819501
Tau Dimethyl (Lys311)	7G5.F4	Purified	100 µl	819601
Tau Nitrated (Tyr18)	Tau-nY18	Purified	100 µl   500 µl	829701   829702
Tau Nitrated (Tyr29)	Tau-nY29	Purified	200 µl   500 µl 1 mL	829801   829802 829803
Tau Phospho (Ser214)	Poly8071	Purified	50 µg	807101
Tau Phospho (Ser235)	Poly8073	Purified	50 µg	807301
Tau Phospho (Ser396)	PHF-13	Purified	100 µl   1 mL	829001   829002
Tau Phospho (Ser396)	Poly8074	Purified	50 µg	807401
Tau Phospho (Ser404)	Poly8075	Purified	50 µg	807501
Tau Phospho (Thr181)	Poly8068	Purified	100 µl	806801
Tau Phospho (Thr205)	Poly8069	Purified	50 µg	806901
Tau Phospho (Thr212)	Poly8070	Purified	50 µg	807001
Tau Phospho (Thr231)	PHF-6	Purified	100 µl   1 mL	828901   828902
Tau Phospho (Thr231)	Poly8072	Purified	50 µg	807201

### Tau Recombinant Proteins

Description	Size	Cat. No.
Recombinant Human Tau-352 (0N3R)	25 µg	842701
Recombinant Human Tau-381 (1N3R)	25 µg	842801
Recombinant Human Tau-383 (0N4R)	25 µg	843001
Recombinant Human Tau-410 (2N3R)	25 µg	842901
Recombinant Human Tau-412 (1N4R)	25 µg	843101
Recombinant Human Tau-441 (2N4R)	25 µg	842501

## Protein Aggregation/Modification Antibodies

Description	Clone	Format	Size	Cat. No.
AICD	Poly8119	Purified	50 µg	811901
Aph-1a, 245-265 (C terminus)	Poly18231	Purified	100 µl	823101
Aph-1aL/SLoop	Poly18232	Purified	100 µl	823201
BACE1 (CO2 terminus)	Poly8402	Serum	100 µl	840201
BACE1 (CO2 terminus)	Poly8401	Serum	100 µl	840101
Prion	3F4	Purified	200 µg   500 µg 1 mg	800301   800302 800303
CD230 (Prion)	3F4	Ascites	200 µl   500 µl 1 mL	800307   800308 800309
CD230 (Prion)	3F4	Biotin	200 µg   500 µg 1 mg	800304   800305 800306
CD230 (Prion)	6D11	Purified	100 µl   250 µl 500 µl	808001   808002 808003
CD230 (Prion)	7D9	Purified	200 µl   500 µl 1 mL	807901   807902 807903
HSF1	4B4	Purified	100 µl	825801
HSF2	3E2	Purified	100 µl	829301
Hsp70	4F8	Purified	100 µl	818101
Insulin Degrading Enzyme (IDE)	Poly18403	Serum	100 µl	840301
Nicastrin (CO2 terminus)	Poly18112	Purified	100 µl	811201
O-GlcNAc	CTD110.6	Ascites	100 µl   500 µl	838001   838002
PARIS (ZNF746)	N196/16	Purified	100 µl	820601
Parkin	Prk 109	Purified	200 µl   500 µl 1 mL	807601   807602 807603
Parkin	Prk 8	Purified	200 µl   500 µl 1 mL	808501   808502 808503

Description	Clone	Format	Size	Cat. No.
PEN2 (C-terminus)	Poly18412	Serum	100 µl	841201
Pin1	Poly28224	Purified	100 µl	822401
PME-1	8A6-F8	Purified	100 µl	820901
Presenilin 1 (CO2 terminus)	Poly18340	Purified	100 µl	834001
Presenilin 1 (N terminus)	NT1	Purified	200 µl   500 µl 1 mL	823401   823402 823403
Presenilin 1 (NH2-terminus)	Poly18111	Purified	100 µl	811101
Presenilin 1, 21-80 (NH terminus)	24-4B5	Purified	200 µl   500 µl 1 mL	823301   823302 823303
Presenilin 1, 260-378 (Loop domain)	34-4C3	Purified	200 µl   500 µl 1 mL	823501   823502 823503
Presenilin 2	PS2	TCS	1 mL	814201
TDP43	3H8	Purified	100 µl	810201
TDP43	TDP2H4	Purified	100 µl	808301
TDP43 Phospho (Ser409/410)	1D3/TDP-43	Purified	100 µl	829901
Ubiquitin	P4G7	Ascites	200 µl   500 µl	838701   838702
Ubiquitin	Poly28405	Serum	100 µl	840501
Ubiquitin	Ubi-1	Ascites	100 µl	836901
Ubiquitin	P4D1	Purified	200 µl	812301
Ubiquitin, 50-65 (bound)	3-39	Ascites	200 µl   500 µl 1 mL	835001   835002 835003
Ubiquitin, 64-76 (free/bound)	5-25	Ascites	200 µl   500 µl 1 mL	834901   834902 834903

TCS= Tissue Culture Supernatant

Learn more:

Tau and our reagents: [biolegend.com/tau](https://www.biolegend.com/tau)

APP and Aβ resources:

[biolegend.com/amyloid\\_precursor\\_protein](https://www.biolegend.com/amyloid_precursor_protein)

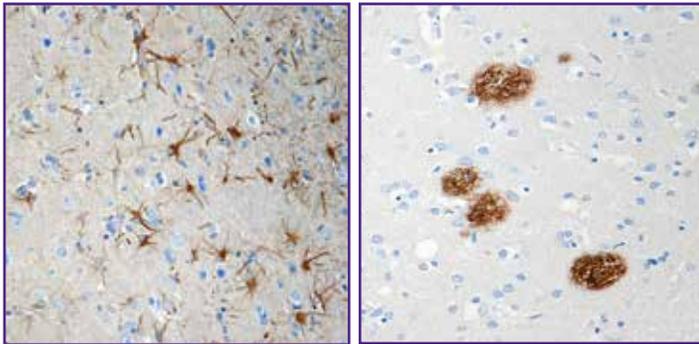
“The addition of Neuroscience and IHC antibody tools to our catalog means accelerated discovery for our current and new customers. We also hope to bring our well-known quality, support, and value in the Immunology community to Neuroscience researchers world-wide.”

**-Gene Lay, Founder, President and CEO, BioLegend.**



# Neuroinflammation

Neuroinflammation represents the response of the central nervous system to perturbations of homeostasis. Inflammatory responses may result from a variety of insults, including trauma and infection. Evidence of a pro-inflammatory state is a finding typical of most CNS diseases including neurodegeneration. BioLegend offers a complete portfolio of products to interrogate inflammatory pathways, e.g. innate immunity, cytokines, etc.



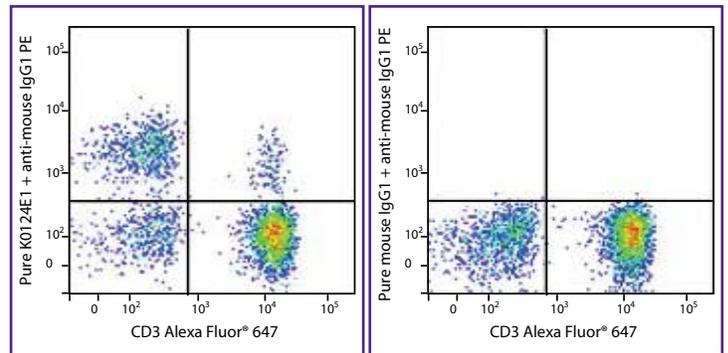
Staining of CX3CR1 (clone 8E10.D9, Cat. No. 824001) on formalin-fixed, paraffin-embedded human brain.

Strong staining of Apo E4-associated plaques on formalin-fixed, paraffin-embedded human Alzheimer's brain tissue using clone 5A9.

## Neuroinflammation Antibodies

Description	Clone	Format	Size	Cat. No.
Annexin A1	74/3	Purified	100 µl	831601
Apo-D	8CD6	Purified	200 µl   500 µl 1 mL	826503   826504 826505
Apo-D	8CD6	Purified	1 mL	826501
ApoD Matched Pair	8CD6, 8BG4	Purified	PAIR	834201
Apo E	D6E10	Purified	200 µl   500 µl 1 mL	803301   803302 803303
Apo E	E6D7	Purified	200 µl   500 µl 1 mL	803401   803402 803403
Apo E2	3C2	Purified	100 µl	815001
Apo E2	8G3	Purified	100 µl	812701
Apo E4	5A9	Purified	100 µl	811701
Apo E4	5B5/ApoE4	Purified	100 µl	811601
Apo E4	5G7	Purified	200 µl   1 mL	813601   813602
Apo E4	9D11	Purified	200 µl   1 mL	813701   813702
Apo J (Clusterin)	Poly18133	Purified	50 µg	813301
Brevican	N294A/6	Purified	100 µl	820101
C3a/C3a(desArg)/C3	D17/1	Biotin	50 µg   500 µg	518001   518002
C3a/C3a(desArg)/C3	K13/16	Purified	50 µg   500 µg	518101   518102
C3AR	hC3aRZ8	Purified	100 µg	345802
C5a/C5a(desArg)	C17/5	Purified	50 µg   500 µg	518201   518202
C5a/C5a(desArg)/C5	G25/2	Biotin	50 µg   500 µg	518305   518306
C5L2	1D9-M12	Purified	100 µg	342402
CCL2 (MCP-1)	MNA.1	Purified	1 mL	801001
CCL2 (MCP-1)	ECE.2	Purified	1 mL	815901
CCL5 (RANTES)	VL1	Purified	100 µl	831501
CD3	BC3	Purified	100 µl	830301
CD4	15-8A2	Purified	1 mL	813001

TCS= Tissue Culture Supernatant



Human peripheral blood lymphocytes were stained with anti-human CD3 (clone HIT3a) Alexa Fluor® 647 and purified anti-human CX3CR1 (clone K0124E1, left) or mouse IgG1, k isotype control (right), followed by anti-mouse IgG1 PE.

Description	Clone	Format	Size	Cat. No.
CD8	15-11C5	Purified	1 mL	813101
CD8a	C8/144B	TCS	1 mL	826601
CD11a	I21/7	Purified	100 µl	830401
CD14	18D11	Purified	1 mL	812401
CD16	3G8	Purified	100 µl	825501
CD18	1B4/CD18	Purified	100 µl	831401
CD18	C71/16	Purified	100 µl	830501
CD33	HIM3-4	Purified	100 µg	303302
CD33	WM53	Purified	100 µg	303402
CD33	P67.6	Purified	25 µg   100 µg	366601   366602
CD33	P67.6	Purified	100 µl	825601
CD34	QBEnd/10	Purified	100 µl	826401   826402 826403
CD36	5-271	Purified	100 µg	336202
CD36	FA6-152	Purified	1 mL	803601
CD36	CRF D-2712	Purified	1 mL	804201
CD36	UA009	Purified	1 mL	808701
CD36L1 (SCARB1, SR-BI)	3D12/ CD36L1	Purified	1 mL	812601
CD40	626	Purified	100 µl	817401
CD44	IM7.8.1	Purified	100 µl	822201
CD62L	DREG 56.6	Purified	100 µl	830001
CD105 (Endoglin)	SN6h	Purified	1 mL	800501
CD120a (TNF-RI)	HM1009	Purified	1 mL	809301
CD120a (TNF-RI)	H398	Purified	1 mL	803701
CD120b	3G7A02	Biotin	500 µg	358410
CD120b	3G7A02	Purified	100 µg	358402
CD120b (TNF-RII)	MR2-1	Purified	1 mL	803801
CD120b (TNF-RII)	HM102	Purified	1 mL	809201
CD126 (IL-6Ra)	UV4	Biotin	25 µg   100 µg	352807   352808
CD126 (IL-6Ra)	UV4	Purified	25 µg   100 µg	352801   352802
CD171 (L1)	14.10	Purified	1 mL	826701
CD171 (L1CAM)	74-5H7	Ascites	500 µl	838101
CD172b (SIRPβ1)	B1D5	Purified	100 µl	833601
CD172b (SIRPβ1)	84	Purified	100 µl	829201
CD184 (CXCR4)	12G5	Purified	100 µl	817501
CD205 (DEC-205)	HD30	Purified	100 µl	821101
CD209a	MMD3	Purified	100 µl	833001

## Neuroinflammation Antibodies (Continued)

Description	Clone	Format	Size	Cat. No.
CD281 (TLR1)	TLR1.136	Purified	100 µg	334502
CD282 (TLR2)	TL2.1	Purified	100 µg	309702
CD282 (TLR2)	T2.5	Purified	25 µg   100 µg	121801   121802
CD282 (TLR2)	TL2.1	Purified	1 mL	801301
CD283 (TLR3)	TLR-104	Purified	100 µg	315002
CD283 (TLR3)	TLR3.7	Purified	1 mL	801501
CD284 (TLR4)	HTA125	Biotin	100 µg	312804
CD284 (TLR4)	HTA125	Purified	100 µg	312802
TLR4 (CD284)/MD-2 Complex	7E3	Purified	1 mL	812501
sMD-2 and TLR4 (CD284)/sMD-2 Complex	4H1/TLR4	Purified	1 mL	810901
CD286 (TLR6)	TLR6.127	Biotin	25 µg	334705
CD286 (TLR6)	TLR6.127	Purified	100 µg	334702
CD289 (TLR9)	5G5	Purified	1 mL	803901
CD314 (NKG2D)	1D11	Purified	100 µl	830801
CD354 (TREM-1)	L5-B8	Purified	1 mL	810001
CD354 (TREM-1)	6B1	Purified	1 mL	804401
Coronin 1a	Poly28399	Serum	100 µl	839901
CX3CR1	2A9-1	Purified	100 µg	341602
CX3CR1	K0124E1	Purified	25 µg   100 µg	355701   355702
CX3CR1	8E10.D9	Purified	100 µl	824001
CXCL10 (IP-10)	Poly5194	Biotin	50 µg	519403
CXCL10 (IP-10)	J034D6	Purified	50 µg   500 µg	519501   519502
CXCL10 (IP-10)	J036G3	Purified	50 µg   500 µg	524401   524402
DJ-1 (PARK7)	4H4	Purified	100 µl	810701
DJ-1 (PARK7)	E2.19	Purified	200 µl   500 µl 1 mL	813801   813802 813803
DJ-1 (PARK7)	Poly18081	Purified	50 µg	808101
F4/80	BM8	Purified	50 µg   500 µg	123101   123102
FMIP	F6D/11	Purified	100 µl	833401
Galectin-3	5C21	Purified	100 µl	810801
IFN-γ	4S.B3	Biotin	50 µg   500 µg	502503   502504
IFN-γ	NIB42	Purified	50 µg   500 µg	502401   502402
IFN-γ	4S.B3	Purified	50 µg   500 µg	502501   502502
IFN-γ	B27	Purified	50 µg   500 µg	506501   506502
IFN-γ	MD-1	Purified	50 µg   500 µg	507501   507502
IL-1 RA	Poly5095	Biotin	50 µg   500 µg	509501   509502
IL-1 RA	JK1RA-1	Purified	50 µg   500 µg	509901   509902
IL-1α	364-3B3-14	Purified	500 µg	500104
IL-1α	BH0110	Biotin	4 Plates	515703
IL-1β	JK1B-2	Biotin	50 µg   500 µg	508301   508302
IL-1β	H1b-98	Biotin	50 µg   500 µg	511703   511704
IL-1β	Poly5174	Biotin	50 µg	517403
IL-1β	JK1B-1	Purified	50 µg   500 µg	508201   508202
IL-1β	JK1B-2	Purified	500 µg	508304
IL-1β	H1b-27	Purified	50 µg   500 µg	511601   511602
IL-2	Poly5176	Biotin	50 µg	517605
IL-2	MQ1-17H12	Purified	50 µg   500 µg	500301   500302
IL-4	MP4-25D2	Biotin	50 µg   500 µg	500803   500804
IL-4	8D4-8	Purified	50 µg   500 µg	500701   500702
IL-4	MP4-25D2	Purified	500 µg	500802
IL-6	MQ2-39C3	Biotin	50 µg   500 µg	501201   501202

Description	Clone	Format	Size	Cat. No.
IL-6	MQ2-13A5	Purified	50 µg   500 µg	501101   501102
IL-6	MQ2-39C3	Purified	500 µg	501204
IL-6	5E1	Purified	1 mL	809001
IL-8	E8N1	Biotin	50 µg   500 µg	511403   511404
IL-8	BH0840	Biotin	500 µg	514704
IL-8	E8N1	Purified	500 µg	511402
IL-8	H8A5	Purified	50 µg   500 µg	511501   511502
IL-8	BH0814	Purified	50 µg   500 µg	514601   514602
IL-10	JES3-12G8	Biotin	50 µg   500 µg	501501   501502
IL-10	JES3-9D7	Purified	50 µg   500 µg	501401   501402
IL-10	JES3-12G8	Purified	50 µg   500 µg	501505   501504
IL-10	JES3-19F1	Purified	50 µg   500 µg	506801   506802
IL-13	Poly5020	Biotin	4 Plates	502001
IL-13	JES10-5A2	Purified	50 µg   500 µg	501901   501902
IL-17A	Poly5189	Biotin	50 µg	518902
IL-17A	BL168	Purified	50 µg   500 µg	512301   512302
IL-17A	BL23	Purified	500 µg	512702
IL-17F	6B9.H8	Purified	100 µl	830201
IL-18	KU18-81	Purified	100 µg	517302
LAP (TGF-β1)	TW4-6H10	Biotin	50 µg   500 µg	349707   349708
LAP (TGF-β1)	TW4-2F8	Purified	100 µg	349602
LAP (TGF-β1)	TW4-6H10	Purified	100 µg	349702
LRP2	CD7D5	Purified	100 µl	826901
LT-α (TNF-β)	359-81-11	Biotin	500 µg	503104
LT-α (TNF-β)	359-238-8	Purified	500 µg	503002
Macrophages	F-6-J	Purified	1 mL	812901
MARCO	PLK-1	Purified	1 mL	801401
MD-2	18H10	Purified	1 mL	825401
MMP-2	4D3 (F14P4D3)	Purified	100 µl	821901
MMP-9	2C3 (F11P2C3)	Purified	100 µl	827801
MMP-9	LS1/82	Purified	100 µl	819701
Monocytes and Macrophages	ER-HR3	Purified	1 mL	809401
MPEG1	25F9	Purified	1 mL	808901
MPO	266-6K1	Purified	1 mL	812801
MPO	8F4/MPO	Purified	1 mL	804301
MPO	2D4	Purified	1 mL	833801
PAR-2	SAM11	Purified	100 µl	817201
TGF-β1	19D8	Biotin	50 µg	521705
TGF-β1	21C11	Purified	50 µg	525301
TIMP2	3A4 (F27P3A4)	Purified	100 µl	814101
TNF-α	MAb11	Biotin	50 µg   500 µg	502903   502904
TNF-α	MAb1	Purified	50 µg   500 µg	502801   502802
TNF-α	MAb11	Purified	50 µg   500 µg	502901   502902
TREM-2	6E9	Purified	1 mL	824801

## Neuroinflammation Recombinant Proteins

Description	Size	Cat. No.
Recombinant Human DJ-1	50 µg	843401

Learn more about inflammation in the CNS at:  
[biolegend.com/neuroinflammation](https://www.biolegend.com/neuroinflammation)

# Synaptic Function

Healthy synaptic connections are essential for brain functions, including memory formation. Impairment of synaptic activity and subsequent synaptic degradation have been linked to neuronal loss in neurodegenerative diseases. BioLegend provides a large portfolio of products to investigate synaptic biology, including the mechanisms that lead to dysfunction and synaptic loss.

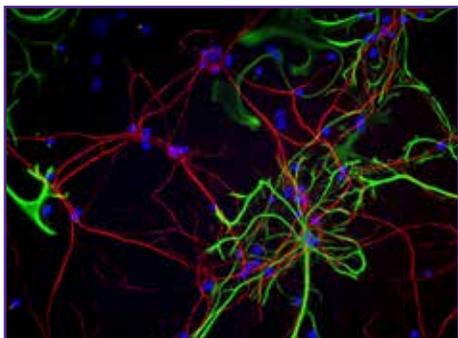
## Synaptic Function Antibodies

Description	Clone	Format	Size	Cat. No.
ADAM22	N46/30	Purified	100 µl	818401
ADAM22	N57/2	Purified	100 µl	831001
AMIGO-1	L86/33	Purified	100 µl	827301
AMIGO-1	L86/36	Purified	100 µl	804801
AMIGO-1	L86A/37	Purified	100 µl	822101
Ankyrin-B	N105/13	Purified	100 µl	821401
Ankyrin-B	N105/17	Purified	100 µl	821501
ASIC1	N271/44	Purified	100 µl	833501
CAMKII Phospho (Thr286)	Poly28023	Purified	100 µl	802301
CaMKIV	3E5.E8	Purified	100 µl	830101
CD271 (p75NTR)	Poly18397	Serum	200 µl	839701
CD271 (p75NTR)	NGFR5	Purified	100 µl	818201
Clathrin Heavy Chain (CLTCL2)	TD.1	Purified	100 µl	813901
Clathrin Light Chain (CLTA)	CON.1	Purified	100 µl	811501
Cofilin 1 Phospho (Ser3)	3E8.A9	Purified	100 µl	810601
Doc2b	N150/21	Purified	100 µl	833201
DOPA Decarboxylase	Poly28295	Purified	100 µl	829501
Dopamine Transporter (CO2-terminus)	Poly28162	Purified	100 µl	816201
Dopamine D3 receptor	N331/19	Purified	100 µl	827501
Dopamine Transporter, EL2	Poly28163	Purified	100 µl	816301
Dynamin-1	D5	Purified	100 µl	817301
GABA(B)R2	N81/2	Purified	100 µl	820501
GABBR1	N93A/49	Purified	100 µl	820801
GABBR2	N81/37	Purified	100 µl	831201
GABRA1	N95/35	Purified	100 µl	832301
GABRA4	Poly28229	Purified	100 µl	822901
GABRA4 Cytosolic Loop	Poly28230	Purified	100 µl	823001
GABRA6	Poly28396	Serum	50 µl	839601
GABRB2	Poly28006	Purified	100 µl	800601
GABRB3	N87/25	Purified	100 µl	818501
GABRD	N151/3	Purified	100 µl	827601
GluR1	N355/1	Purified	100 µl	819801
GluR1 Phospho (Ser831)	Poly28024	Purified	150 µl	802401
GluR1 Phospho (Ser845)	Poly28025	Purified	150 µl	802501
GluR2	L21/32	Purified	100 µl	810501
GRK (pan-reactive)	N145/20	Purified	100 µl	833101
IP3R1	L24/18	Purified	100 µl	817701
KCC2	N1/12	Purified	100 µl	821701
KCC2	N1/66	Purified	100 µl	827901
KCNA5	2D10.D6	Purified	100 µl	814901
LRP4 (NH2 terminus)	N207/27	Purified	100 µl	832201
MAGUK (pan reactive)	K28/86	Purified	100 µl	817801
MAP6 (STOP)	STOP	Purified	100 µl	824701
nAChR, α1, α3 & α5 Subunits	210	Ascites	500 µl	838301

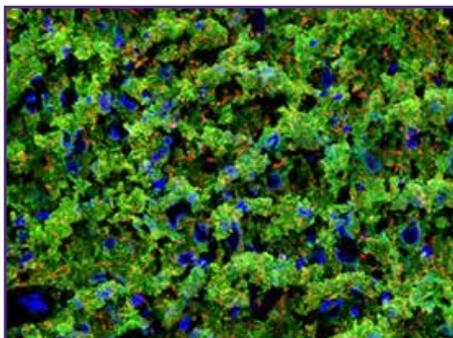
Description	Clone	Format	Size	Cat. No.
nAChR, α1-Subunit	61	Ascites	500 µl	839101
nAChR, α4-Subunit	299	Ascites	500 µl	839201
nAChR, α7-Subunit	319	Ascites	500 µl	838401
nAChR, α7-Subunit	306	Ascites	500 µl	836701
nAChR, β2-Subunit	270	Ascites	500 µl	838501
nAChR, γ-Subunit	66	Ascites	500 µl	838601
Neurologin-1	N97A/31	Purified	100 µl	819001
Neurologin-3	N110/29	Purified	100 µl	822001
NMDAR1	N308/48	Purified	100 µl	818601
NMDAR1	R1JHL	Purified	15 µg	828201
NMDAR2A	N327/95	Purified	100 µl	832101
NMDAR2A	N327A/38	Purified	100 µl	832401
NMDAR2A	Poly28341	Purified	10 µg	834101
NMDAR2A	Poly18165	Purified	50 µg	816501
NMDAR2B	N59/20	Purified	100 µl	832501
NMDAR2B	N59/36	Purified	100 µl	818701
NMDAR2B	Poly28113	Purified	10 µg	811301
NMDAR2C	Poly28228	Purified	10 µg	822801
Notch 1	N253/32	Purified	100 µl	819101
Notch 1	mN1A	Purified	100 µl	828701
NrCAM	N343/26	Purified	100 µl	821601
p120 Catenin	2B12	Purified	100 µl	828301
PICK1	L20/8	Purified	100 µl	830901
PPP3CA (CnA1)	2E2.D11	Purified	100 µl	817601
γ-protecdherin (pan reactive)	N159/5	Purified	100 µl	831701
γ-protecdherin A (pan reactive)	N144/32	Purified	100 µl	819201
γ-protecdherin-B2	N148/30	Purified	100 µl	832701
PSD-93 (Chapsyn-100)	N18/30	Purified	100 µl	821201
PSD-93 (Chapsyn-110)	N18/28	Purified	100 µl	818301
PSD95	K28/43	Purified	100 µl	810401
PSD95	K28/74	Purified	100 µl	810301
RGS14	N133/21	Purified	100 µl	821801
RhoG	1F3 B3 E5	Purified	100 µl	814701
SALM2 (LRFN1)	N52B/27	Purified	100 µl	819301
SAP97	K64/15	Purified	100 µl	830701
SAP102	N19/2	Purified	100 µl	832001
SAPAP (pan reactive)	N127/31	Purified	100 µl	832601
SAPAP1	N238/31	Purified	100 µl	831801
SNAP-25	SMI 81	Ascites	100 µl   500 µl	836301   836302
SNAP-25	SP12	Purified	100 µl	805001
Stonin-2	N346/9	Purified	100 µl	804701
SVOP	N356/9	Purified	100 µl	819901
Synapsin I	Poly28026	Purified	10 µg	802601
Synaptobrevin (VAMP)	SP10	Ascites	500 µl	837001
Synaptobrevin	SP11	Purified	100 µl	805101
Synaptophysin	SP17	Ascites	500 µl	837101
Synaptotagmin-12	N277/7	Purified	100 µl	820401
SynCAM4	N244/5	Purified	100 µl	833301
Syntaxin	SP8	Purified	100 µl	827001
TARP γ2 (Stargazin)	N245/1	Purified	100 µl	827401
Thorase (Atad1)	N125/10	Purified	100 µl	820001
Tryptophan Hydroxylase	Poly28164	Purified	100 µl	816401
Tyrosine Hydroxylase	2/40/15	Purified	100 µl	818001
Tyrosine Hydroxylase	Poly28008	Purified	100 µl	800801
Tyrosine Hydroxylase Phospho (Ser40)	Poly28021	Purified	100 µl	802101
VGlut1	N28/9	Purified	100 µl	821301
VGlut2	N29/29	Purified	100 µl	832801
WAVE1	K91/36	Purified	100 µl	817901

# Cellular Markers

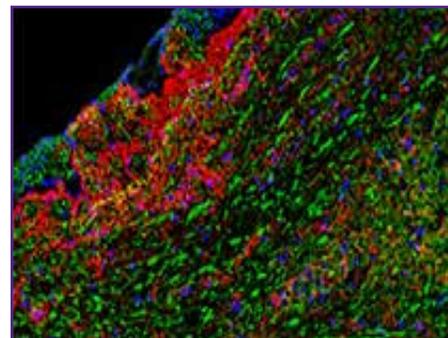
BioLegend offers an extensive collection of cell surface, cytoskeletal and organelle markers. These markers enable researchers to distinguish neuronal and glial cell types in tissue sections or cell culture applications. BioLegend is proud to offer SMI® monoclonal antibodies, originally developed by Dr. Ludwig Sternberger. These antibodies have become the gold standard as neural and glial markers and have an extensive publication history in scientific literature.



Rat cortical neurons and glia in mixed tissue culture stained with anti-NF-H (red) and GFAP (green, Cat. No. 840001). The nuclei are stained with Hoechst dye (blue). Photo courtesy of EnCor Biotechnology Inc.



Immunohistochemistry staining of Tubulin β 3 (clone TUJ1, green) on rat hippocampus section. Additional staining provided by anti-NF-H (red) and DRAQ5 (blue). Photo courtesy of Molecular Expressions.



Immunostaining of the SMI 35 antibody (green) on rat brain (8 μm sagittal section). Other structures visualized with anti-GFAP (red, Cat. No. 840001) and Hoechst (blue). Photo courtesy of Molecular Expressions.

## Cellular Marker Antibodies

Description	Clone	Format	Size	Cat. No.
Blood-Brain Barrier	SMI 71	Ascites	100 μl   500 μl	836801   836802
CCR8	L263G8	Purified	100 μg	360602
CD11b	ICRF44	Biotin	100 μg	301304
CD11b	M1/70	Biotin	50 μg   500 μg	101203   101204
CD11b	ICRF44	Purified	100 μg	301302
CD11b	M1/70	Purified	50 μg   500 μg	101201   101202
CD11b (activated)	CBRM1/5	Purified	100 μg	301402
CD11c	3.9	Biotin	25 μg   100 μg	301611   301612
CD11c	3.9	Purified	25 μg   100 μg	301601   301602
CD11c	Bu15	Purified	100 μg	337202
CD25	BC96	Biotin	100 μg	302624
CD25	M-A251	Biotin	25 μg   100 μg	356123   356124
CD25	BC96	Purified	100 μg	302602
CD25	M-A251	Purified	25 μg   100 μg	356101   356102
CD45	HI30	Biotin	25 μg   100 μg	304003   304004
CD45	HI30	Purified	25 μg   100 μg	304001   304002
CD45	Tü116	Purified	25 μg   100 μg	361901   361902
CD45R	MB4B4	Purified	100 μl	833701
CD54	HA58	Purified	25 μg   100 μg	353101   353102
CD54	HCD54	Biotin	100 μg	322706
CD54	HCD54	Purified	100 μg	322702
CD68	Y1/82A	Purified	25 μg   100 μg	333801   333802
CD122 (IL-2Rβ)	TU27	Purified	100 μg	339002
CD163	GHI/61	Biotin	25 μg   100 μg	333603   333604
CD163	RM3/1	Purified	100 μg	326502
CD163	GHI/61	Purified	100 μg	333602
CD183 (CXCR3)	G025H7	Purified	100 μg	353702
CD184 (CXCR4)	12G5	Biotin	100 μg	306504
CD184 (CXCR4)	12G5	Purified	25 μg   100 μg	306501   306502
CD192 (CCR2)	K036C2	Purified	25 μg   100 μg	357201   357202
CD195 (CCR5)	T21/8	Purified	100 μg	321402
CD195 (CCR5)	J418F1	Purified	25 μg   100 μg	359101   359102
CD200 (OX2)	OX-104	Biotin	100 μg	329204
CD200 (OX2)	OX-104	Purified	25 μg   100 μg	329201   329202
CD200 Receptor	OX-108	Purified	100 μg	329302

Description	Clone	Format	Size	Cat. No.
CD206 (MMR)	15-2	Biotin	25 μg   100 μg	321117   321118
CD206 (MMR)	15-2	Purified	25 μg   100 μg	321101   321102
CD282 (TLR2)	TL2.1	Purified	100 μg	309702
CD282 (TLR2)	T2.5	Purified	25 μg   100 μg	121801   121802
CD283 (TLR3)	TLR-104	Purified	100 μg	315002
CD284 (TLR4)	HTA125	Purified	100 μg	312802
CD369 (Dectin-1/ CLEC7A)	15E2	Purified	100 μg	355402
CX3CR1	2A9-1	Purified	100 μg	341602
CX3CR1	K0124E1	Purified	25 μg   100 μg	355701   355702
FOX3 (NeuN)	1B7	Purified	100 μl	834501
GFAP	2E1.E9	Purified	25 μg   100 μg	644701   644702
GFAP	SMI 21	Ascites	100 μl   500 μl	837201   837202
GFAP	SMI 23	Ascites	100 μl   500 μl	837301   837302
GFAP	SMI 24	Ascites	100 μl   500 μl	837401   837402
GFAP	SMI 25	Ascites	100 μl   500 μl	837501   837502
GFAP (Cocktail)	SMI 22	Ascites	100 μl   500 μl	835301   835302
GFAP (Cocktail)	SMI 26	Ascites	100 μl   500 μl	837601   837602
MAP2	SMI 52	Purified	100 μl	801801
Myelin Basic Protein	SMI 94	Ascites	100 μl   500 μl	836501   836502
Myelin Basic Protein	SMI 99	Purified	100 μl   500 μl	808401   808402
Myelin CNPase	SMI 91	Ascites	100 μl   500 μl	836401   836402
Neurofilament H (NF-H)	SMI 37	Ascites	100 μl   500 μl	835801   835802
Neurofilament H (NF-H)	SMI 38	Ascites	100 μl   500 μl	835901   835902
Neurofilament H (NF-H)	SMI 39	Ascites	100 μl   500 μl	836001   836002
Neurofilament H (NF-H), Nonphosphorylated	SMI 32	Purified	100 μl	801701
Neurofilament H (NF-H), Phosphorylated	SMI 34	Ascites	100 μl   500 μl	835501   835502
Neurofilament H (NF-H), Phosphorylated	SMI 36	Ascites	100 μl   500 μl	835701   835702
Neurofilament H (NF-H), Phosphorylated	SMI 31	Purified	100 μl	801601
Neurofilament H & M (NF-H/NF-M), Hypophosphorylated	SMI 35	Ascites	100 μl   500 μl	835601   835602

Description	Clone	Format	Size	Cat. No.
Neurofilament H & M (NF-H/NF-M), Non-Phosphorylated	SMI 33	Ascites	100 µl   500 µl	835401   835402
Neurofilament H & M (NF-H/NF-M), Phosphorylated	SMI 310	Ascites	100 µl   500 µl	837701   837702
Neurofilament Marker (pan axonal, cocktail)	SMI 312	Ascites	100 µl   500 µl	837901   837902
Neurofilament Marker (pan-neuronal, cocktail)	SMI 311	Ascites	100 µl   500 µl	837801   837802
NSE	NSE-P1	Purified	200 µl	804901
NSE	NSE-P2	Purified	200 µl	804501
S100A4	S100A4	Purified	250 µl	810101
Tau, 95-108 (PHF)	SMI 51	Ascites	100 µl   500 µl	836101   836102
Tubulin β-3, Depolymerized (TUBB3)	SMI 61	Ascites	500 µl	920801
Tubulin β-3, Polymerized (TUBB3)	SMI 62	Ascites	500 µl	921001

## Neural Stem Cell Antibodies

Description	Clone	Format	Size	Cat. No.
CD56 (NCAM)	MEM-188	Biotin	100 µg	304620
CD56 (NCAM)	HCD56	Biotin	25 µg   100 µg	318319   318320
CD56 (NCAM)	5.1H11	Biotin	25 µg   100 µg	362535   362536
CD56 (NCAM)	MEM-188	Purified	25 µg   100 µg	304601   304602
CD56 (NCAM)	HCD56	Purified	100 µg	318302
CD56 (NCAM)	5.1H11	Purified	100 µg	362502
CD271 (NGFR)	ME20.4	Purified	25 µg   100 µg	345101   345102
CD271 (p75NTR)	NGFR5	Purified	100 µl	818201
FOX3 (NeuN)	1B7	Purified	100 µl	834501
MAP1B	AA9	Ascites	100 µl	922901
MAP2	SMI 52	Purified	100 µl	801801
MAP2	Poly28225	Purified	50 µl	822501
MAP2	AA6	Purified	100 µl	828101
Nestin	10C2	Purified	25 µg   100 µg	656801   656802
Nestin	2C1 3B9 (10C2)	Purified	100 µl   200 µl	809801   809802
Neurofilament L (NF-L)	Poly28409	Serum	100 µl	840901
Neurofilament α-Internexin (NF66)	Poly28407	Serum	100 µl	840701
NKX2-1 (TTF-1)	14D3A28	Purified	100 µg	655402
NSE	NSE-P2	Purified	200 µl	804501
NSE	NSE-P1	Purified	200 µl	804901
Pax-6	Poly19013	Purified	100 µl	901301
Tubulin β 3 (TUBB3)	TUJ1	Purified	100 µl   250 µl	801201   801202
Tubulin β-3 (TUBB3)	Poly18020	Purified	100 µl	802001
Tyrosine Hydroxylase	2/40/15	Purified	100 µl	818001

## Cell Structure Antibodies

Description	Clone	Format	Size	Cat. No.
Abi-1	4E2	Purified	200 µl   500 µl   1 mL	811401   811402   811403
Alpha Skeletal Muscle Actin	Alpha Sr-1	TCS	250 µl	904701
Alpha Smooth Muscle Actin	1A4	TCS	250 µl	904601
Alpha β Crystallin	Poly9079	Purified	200 µl   500 µl	907901   907902
Alpha-I Spectrin	17C7	TCS	200 µl   500 µl   1 mL	803101   803102   803103
Alpha-II Spectrin	D8B7	Ascites	200 µl   500 µl   1 mL	803201   803202   803203
CLIC4 N-Terminal	Poly9084	Purified	100 µl	908401
COL17A1	NC16A-3	Purified	1 mL	917101
Cytokeratin	MNF116	TCS	250 µl	919601
Cytokeratin (4, 5 and 6)	D5/16 B4	Purified	250 µl	919701
Cytokeratin 7	OV-TL 12/30	TCS	250 µl	904201
Cytokeratin 10	DE-K10	TCS	250 µl	904301

Description	Clone	Format	Size	Cat. No.
Cytokeratin 18	5E8/CK-18	Purified	100 µl	914301
Cytokeratin 20	Ks20.8	Purified	1 mL   6 mL	916401   916402
Cytoplasmic Dynein Intermediate Chain	74.1	Purified	100 µl	904901
Desmin	D33	TCS	250 µl	919901
Desmin	D33	TCS	1 mL	919902
Flightless-I Protein	116.40	Purified	100 µl	907701
GFAP	2A5	TCS	200 µl	801101
GFAP	Poly28400	Serum	100 µl	840001
GFAP	GF2	Purified	500 µl	800101
GFAP	Poly28294	Purified	100 µl	829401
Giantin	Poly19087	Alexa Fluor® 488	100 µl	908701
Giantin	Poly19243	Serum	200 µl	924302
Giantin	Poly19087	Purified	100 µl	909701
GPP130	Poly19238	Serum	200 µl	923801
Involucrin	Poly19244	Serum	200 µl	924401
Keratin 1	Poly19056	Purified	100 µl	905601
Mouse Keratin 6A	Poly19057	Purified	100 µl	905701
KIF3A	K2.4	Purified	200 µl	909001
Kinesin Heavy Chain	SUK-4	Purified	200 µl	908901
Lamin A	Poly19234	Serum	100 µl	923401
Lamin A/C	XB10	Purified	100 µl	918901
LASP1	8C6	Purified	100 µl	909301
MAD2	Poly19246	Serum	200 µl	924601
mAKAP	OR017.720	Purified	100 µl	923201
mAKAP	Poly19028	Purified	100 µl	902801
MAN2A1 (Mannosidase II)	53FC3	Ascites	200 µl   500 µl	923101   923102
MAP1B	AA9	Ascites	100 µl	922901
MAP2	AA5	Ascites	100 µl	922801
MAP2	Poly18406	Serum	100 µl	840601
MAP2	AA6	Purified	100 µl	828101
MAP2	Poly28225	Purified	50 µl	822501
Myosin Heavy Chain	H11	Ascites	100 µl	922701
Myosin II (pan reactive)	C5C.S2	TCS	100 µl	909401
Myosin Heavy Chain II-A	Poly19098	Purified	100 µl	909801
Myosin Heavy Chain II-B	Poly19099	Purified	100 µl	909901
Myosin Phosphatase	Poly19251	Serum	100 µl	925101
Nesprin-1	Poly19027	Purified	100 µl	902701
Nestin	Poly18419	Serum	100 µl	841901
Nestin	2C1 3B9 (10C2)	Purified	100 µl   200 µl	809801   809802
Nestin (C terminus)	Nestin 16	Serum	100 µl	841801
Nestin (Repeat region)	Nestin 18	Serum	100 µl	841701
Nestin (Repeat region)	Nestin 24	Serum	100 µl	841601
Nestin Tail	Nestin 20	Serum	100 µl	839801
Neurofilament H (NF-H)	Poly28226	Purified	50 µl	822601
Neurofilament H (NF-H), Phosphorylated	NAP4	Ascites	100 µl	839001
Neurofilament H Phospho (NF-H)	Poly28408	Serum	100 µl	840801
Neurofilament L (NF-L)	DA2	TCS	100 µl	809901
Neurofilament L (NF-L)	Poly28409	Serum	100 µl	840901
Neurofilament M (NF-M)	3H11	Ascites	100 µl	839301
Neurofilament M (NF-M)	Poly28410	Serum	100 µl	841001
Neurofilament M (NF-M)	Poly28227	Purified	100 µl	822701

TCS= Tissue Culture Supernatant

## Cell Structure Antibodies (Continued)

Description	Clone	Format	Size	Cat. No.
Neurofilament M/H (NF-M, NF-H)	RMdO-20	Ascites	200 µl	801901
Neurofilament α-Internexin (NF-66)	Poly28407	Serum	100 µl	840701
Neurofilament α-Internexin (NF-66)	1D2	Ascites	200 µl	811001
Neurofilament α-Internexin (NF-66)	2E3	Ascites	200 µl	800401
NMHC II-C	Poly19192	Purified	100 µl	919201
Nuclear Pore Complex Proteins	MAb14	Purified	100 µl   500 µl	902901   902902
NUP153	QE5	Purified	100 µl	906201
Pericentrin	Poly19237	Serum	200 µl	923701
Peripherin (panreactive)	Poly28411	Serum	100 µl	841101
Peripherin	8G2	TCS	200 µl	907801
Peripherin	7C5	Purified	200 µl	815801
α-Tubulin	AA13	Purified	100 µl	909601
Tubulin α 1b, Acetylated (TUBA1B)	6-11B-1	Ascites	200 µl	920901
Detyrosinated α-Tubulin	AA12	Purified	100 µl	909501
β-Tubulin	TU27/ Tubulin	Purified	250 µl	903401
Tubulin-β 2B (TUBB2B)	6B1	Purified	200 µl	909201
Tubulin-β 2B (TUBB2B)	7B9	Purified	200 µl	909101
Tubulin β 3 (TUBB3)	TUJ1	Alexa Fluor® 488	100 µl	801203
Tubulin β-3 (TUBB3)	TU-20	TCS	1 mL	918201
Tubulin β-3 (TUBB3)	Poly18020	Purified	100 µl	802001
Tubulin β-3 (TUBB3)	TUJ1	Purified	100 µl	801201   801202
Tubulin β-3, Depolymerized (TUBB3)	SMI 61	Ascites	500 µl	920801
Tubulin β-3, Polymerized (TUBB3)	SMI 62	Ascites	500 µl	921001
Tubulin γ 1 (TUBG1)	Poly9245	Serum	200 µl	924501
Vimentin	Vim 3B4	TCS	250 µl	904501
Vimentin	Poly29191	Purified	100 µl	919101

## Cell Structure Synthetic Peptide

Description	Size	Cat. No.
Recombinant Human Tubulin β 3 (TUBB3) Peptide	1 mg	843601

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## Related Products

BioLegend is building its portfolio to allow researchers to interrogate important biological pathways related to neurodegeneration and brain biology. We have a growing offering in several areas, including cell signaling, autophagy, mitochondrial markers, and epigenetics.

## Cell Signaling Antibodies

Description	Clone	Format	Size	Cat. No.
ABCA3	3C9	Purified	100 µl	911001
Bax	6A7	Ascites	100 µl	922601
Bin-1	2F11/Bin-1	Purified	500 µl   1 mL	917001   917002
BrdU	Bu20a	TCS	250 µl	900201
CD3	Poly29158	Purified	6 mL	915801
CD29 (Integrin β1)	P5D2	Ascites	100 µl	921301
CD29, Activating (Integrin β1)	P4G11	Ascites	100 µl	921401
CD31 (PECAM-1)	P2B1	Ascites	100 µl	910003
CD31	JC/70A	Purified	1 mL   6 mL	916001   916002
CD49b (Integrin α2)	P1E6	Purified	100 µl	910901
CD49c (Integrin α3)	P1B5	Ascites	100 µl	921601
CD49d	P4C2	Purified	100 µl	910101
CD49E (Integrin α5)	P1D6	Ascites	100 µl	921701
CD51 (Integrin αvβ5)	P1F6	Ascites	100 µl	920001
CD68	KP1	TCS	1 mL   6 mL	916101   916102
CD93	60.11	Ascites	100 µl	920701
CD93	74.5.2	Ascites	100 µl	920601
CD106 (VCAM-1)	P3C4	Purified	100 µl	919801
CD141 (Thrombomodulin)	Phx-01	Purified	100 µl	902101
CD141 (Thrombomodulin)	Phx-02	Purified	100 µl	902201
DUX4	P2B1	Purified	100 µl	910001
ER81	Poly8404	Serum	100 µl	840401
HOX C8	C952-12E	Ascites	100 µl   500 µl	920501   920502
Hoxb-1	Poly19081	Purified	100 µl	908101
KIN-28	Poly19249	Serum	200 µl	924901
Krox-20 (EGR2)	Poly19011	Purified	100 µl	901101
MAPK Phospho (Thr202/Tyr204)	Poly29193	Purified	100 µl	919301
MARCKS Phospho (Ser152/156)	Poly28022	Purified	100 µl	802201
MLK-2	Poly19041	Purified	1 mL	904101
Msx-1	4F11	Ascites	100 µl	921101
p38 MAPK Phospho (Thr180/Tyr182)	Poly29035	Purified	100 µl	903501
p53 Phospho (Ser392)	Poly29036	Purified	100 µl	903601
Pax-2	Poly19010	Purified	200 µl	901001
Pax-6	Poly19013	Purified	100 µl	901301
Prox1	Poly19252	Serum	200 µl	925201
Tmem91	N160/21	Purified	100 µl	821001
TNF-α	TNF 104C	Purified	250 µl	901201
TTF-1	8G7G3/1	Purified	6 mL	918101

TCS= Tissue Culture Supernatant

## Mitochondrial Function/Autophagy Antibodies

Description	Clone	Format	Size	Cat. No.
c-Abl	8E9	Purified	100 µl	831901
CASK	K56A/50	Purified	100 µl	830601
CD107a (LAMP-1)	1D4B	Purified	100 µl	816001
CD107b (LAMP-2)	ABL-93	Purified	100 µl	816101
CD107b (LAMP2)	H4B4	Purified	100 µl	809701
ERAB	5F3	Purified	200 µl   500 µl 1 mL	834401   834402 834403
Grp75 (Mortalin)	N52A/42	Purified	100 µl	818801
LRRK2 (NH2 terminus)	N138/6	Purified	100 µl	818901
LRRK2	MC.028.83.76.242	Purified	100 µl	808201
Mitofusin-1	1G3.B6	Purified	100 µl	814601
Mitofusin-1	N111/24	Purified	100 µl	831101
Mitofusin-2	N153/5	Purified	100 µl	820301
p62 (SQSTM1)	1B5.H9	Purified	100 µl	814801
Pancortin	K96/7	Purified	100 µl	827201
Pan-LC3-A	CV698.792.28	Purified	100 µl	827101
PINK1	5E1.D8	Purified	100 µl	834801
PINK1	N4/15	Purified	100 µl	832901
VDAC1	N152B/23	Purified	100 µl	820701

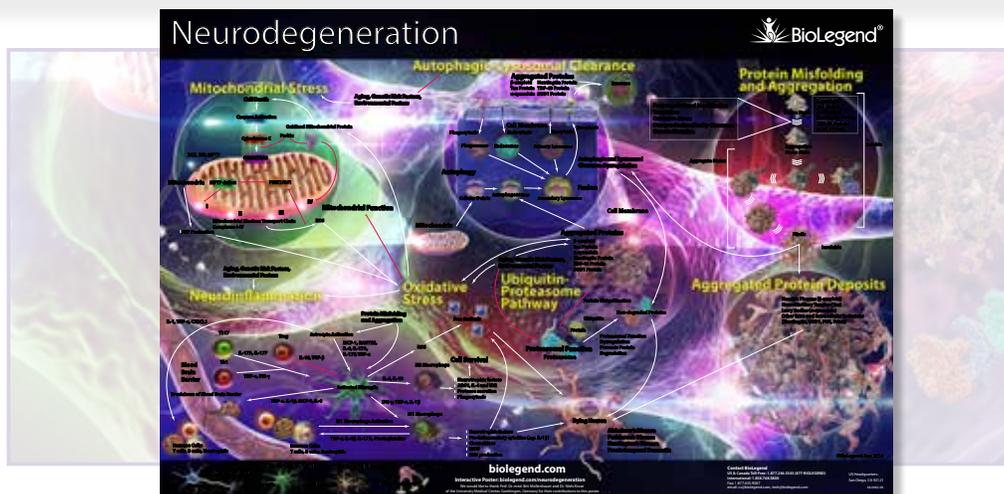
## Epigenetics Antibodies

Description	Clone	Format	Size	Cat. No.
Dicer	N167/7	Purified	100 µl	820201
FMRP	5C2	Purified	100 µl	834701
FMRP	6B8/FMRP	Purified	100 µl	834601
HDAC1	10E2/HDAC1	Purified	100 µl	815101
HDAC2	3F3/HDAC2	Purified	100 µl	815201
HDAC3	3G6	Purified	100 µl	815301
Histone H3 (C-terminus)	1B1-B2	Purified	100 µl	819401

Description	Clone	Format	Size	Cat. No.
Histone H3 Dimethyl (Lys9)	5E5-G5	Purified	100 µl	815501
Histone H3 Monomethyl (Lys9)	7E7.H12	Purified	100 µl	824201
Histone H3 Nonmethyl (Lys9)	9B1-2G6	Purified	100 µl	815701
Histone H3 Trimethyl (Lys9)	6F12-H4	Purified	100 µl	815601
Histone H4 Trimethyl (Lys 20)	6F8-D9	Purified	100 µl	827701
Histone H4 Monomethyl (Lys20)	5E10-D8	Purified	100 µl	828001
I1PP2A	5A10	Purified	100 µl   500 µl	817001   817002
I1PP2A	5A2	Purified	100 µl   500 µl	816901   816902
I2PP2A	3F2	Purified	100 µl   500 µl	817101   817102
IGBP-1	5F6	Purified	100 µl	828601
LCMT1 (PPM1)	4A4	Purified	100 µl	824501
MECP2	N227/21	Purified	100 µl	814001
PP2Aα	5H4/PP2Aα	Ascites	200 µl   500 µl	839501   839502
PP2AC (Leu309)	1D7	Purified	100 µl	824101
PP2AC	7A6/PP2AC	Purified	100 µl	828501
PP2AC Methyl (Leu 309)	2A10	Purified	100 µl	828801
PPP2R1A	6F9	Purified	100 µl	829101
PPP2R1A	6G3	Purified	100 µl	824901
PPP2R2A	2G9	Purified	100 µl	831301
PPP2R4 (PTPA)	5G3	Purified	100 µl	824401
PPP2R5D	H5-D12	Purified	100 µl	828401
PPP2R5E	5A5-F3	Purified	100 µl	815401

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