abcam

ab273518

Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23338-106
Purification technique	Affinity purification Protein A
Concentration	1.047 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse, Rat
Dilution info	-

Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Rat, Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information L1cam

Function Neural cell adhesion molecule involved in the dynamics of cell adhesion and in the generation of transmembrane signals at tyrosine kinase receptors. During brain development, critical in multiple processes, including neuronal migration, axonal growth and fasciculation, and synaptogenesis. In the mature brain, plays a role in the dynamics of neuronal structure and function, including synaptic plasticity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab273518 is the carrier-free version of ab272733.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	L1CAM also known as neural cell adhesion molecule L1 is a transmembrane protein with a molecular weight of approximately 200-220 kDa. The L1CAM protein belongs to the immunoglobulin superfamily and is heavily glycosylated. It plays a significant role in cell adhesion processes within the nervous system. L1CAM is

	expressed in a variety of tissues including the brain kidney and peripheral nerves and is notably present in neuronal cells where it engages in cell-cell interactions. Researchers frequently use L1CAM IHC ELISA methods and specific fluorescent markers like Alexa Fluor 568 to study its expression patterns and localization.
Biological function summary	L1CAM facilitates neuronal migration axonal growth and synaptic plasticity. This protein participates in the formation and maintenance of neural networks. It interacts with other cell adhesion molecules and components of the extracellular matrix. L1CAM acts as an important modulator within neuronal signaling complexes which impacts the development and regeneration of the nervous system. Insights into its structural and cell interaction properties have made it a focus for understanding nervous system functions.
Pathways	L1CAM participates extensively in the MAPK and PI3K/AKT pathways. These pathways contribute to cellular growth survival and programmed cell death. The protein interacts with other molecules such as integrins and FGFRs to propagate signaling cascades important for cellular response mechanisms. These connections help modulate cytoskeletal dynamics influencing cellular adhesion and motility needed during brain development and response to injury.
Associated diseases and disorders	L1CAM has been associated with hydrocephalus and some cancers. Mutations in the L1CAM gene can lead to L1 syndrome which includes a spectrum of neurological disorders particularly hydrocephalus. In cancer overexpression or altered regulation of L1CAM may correlate with tumor aggressiveness and metastatic potential. L1CAM's association with integrin and cadherin proteins underlines its relevance in pathological states and highlights a potential target for therapeutic interventions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

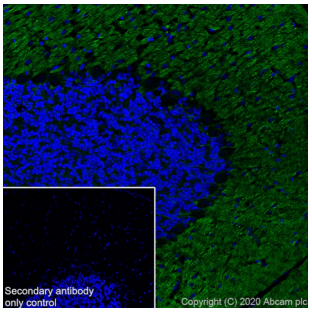
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images



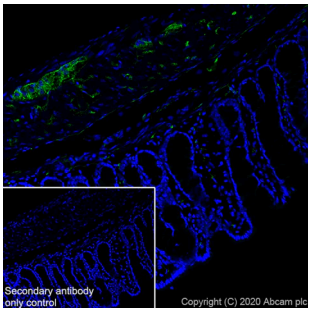
Immunohistochemistry (Frozen sections) - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

L1CAM Immunohistochemistry (Frozen sections) staining using rabbit Anti-L1CAM antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat cerebellum tissue labeling L1CAM with ab272733 at 1/500 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution (Green). Positive staining on rat cerebellum is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



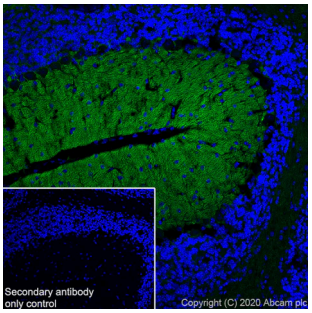
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L1CAM Immunohistochemistry (Frozen sections) staining using rabbit Anti-L1CAM antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat colon tissue labeling L1CAM with ab272733 at 1/500 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (Green). Positive staining on rat colon is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

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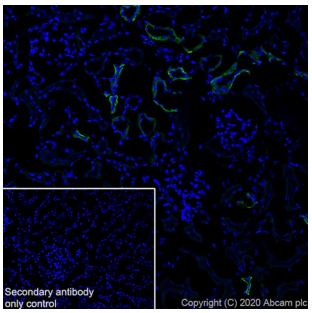
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Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.

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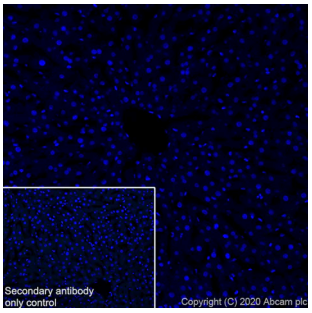
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L1CAM Immunohistochemistry (Frozen sections) staining using rabbit Anti-L1CAM antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat kidney tissue labeling L1CAM with ab272733 at 1/500 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution (Green). Positive staining on rat kidney is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

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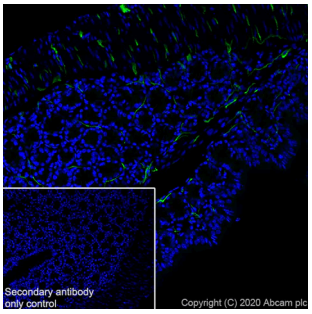
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L1CAM Immunohistochemistry (Frozen sections) staining using rabbit Anti-L1CAM antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat liver tissue labeling L1CAM with ab272733 at 1/100 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution (Green). **Negative control:** No staining on rat liver (PMID: 22888955) is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.

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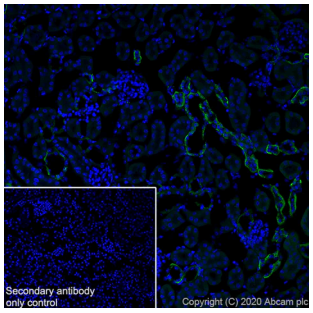
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Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

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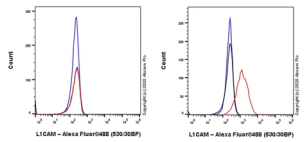
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Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse kidney tissue labeling L1CAM with ab272733 at 1/500 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution (Green). Positive staining on mouse kidney is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488)at 1/1000 (2 ug/ml) dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



Flow Cytometry - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

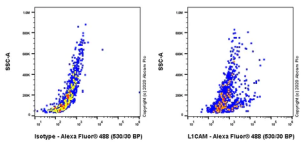
L1CAM Flow Cytometry staining using rabbit Anti-L1CAM antibody

Flow cytometric analysis of NIH/3T3 (Mouse embryonic fibroblast)(Left) / B16-F10 (Mouse melanoma mixture of spindle-shaped and epithelial-like cells)(Right) cells labelling L1CAM with ab272733 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Negative control: NIH/3T3 (PMID: 22973895).

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



Flow Cytometry - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

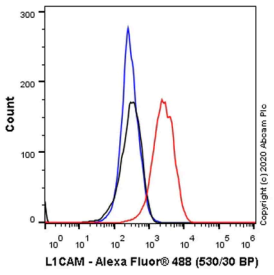
L1CAM Flow Cytometry staining using rabbit Anti-L1CAM antibody

Flow cytometric analysis of Mouse primary neuron cells cells labelling L1CAM with ab272733 at 1/500 dilution (0.1ug) (Right) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Left).

Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



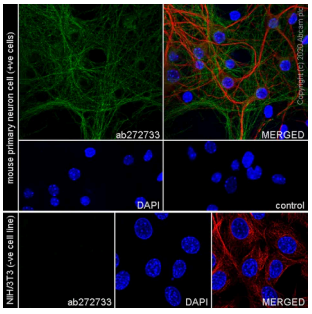
Flow Cytometry - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

L1CAM Flow Cytometry staining using rabbit Anti-L1CAM antibody

Flow cytometric analysis of PC-12 (Rat adrenal gland pheochromocytoma) cells labelling L1CAM with ab272733 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).

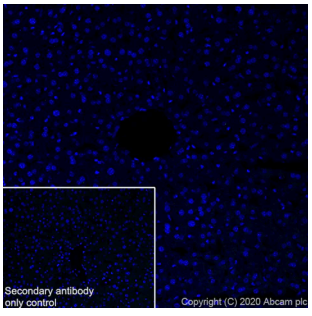


Immunocytochemistry/ Immunofluorescence - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

L1CAM Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-L1CAM antibody

Immunofluorescent analysis of 100% methanol-fixed mouse primary neuron cell cells labelling L1CAM with ab272733 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing positive staining in mouse primary neuron cell. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. L1CAM is specifically localized to axons, but was absent from MAP2-positive dendrites (PMID: 27001749). **Negative control:** NIH/3T3 (PMID: 22973895). ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain dentrites at 1/500 dilution, followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



Immunohistochemistry (Frozen sections) - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

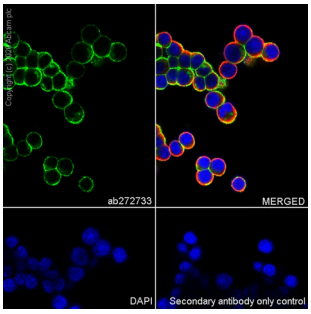
L1CAM Immunohistochemistry (Frozen sections) staining using rabbit Anti-L1CAM antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse liver tissue labeling L1CAM with ab272733 at 1/100 dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution (Green). **Negative control:** No staining on mouse liver (PMID: 22888955) is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).

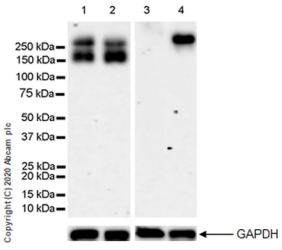


Immunocytochemistry/ Immunofluorescence - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

L1CAM Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-L1CAM antibody

Immunofluorescent analysis of 100% methanol-fixed PC-12 cells labelling L1CAM with ab272733 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing membranous and cytoplasmic staining in PC-12 cell line. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733).



Western blot - Anti-L1CAM antibody [EPR23338-106] - BSA and Azide free (ab273518)

L1CAM Western blot staining using rabbit Anti-L1CAM antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Negative control: NIH/3T3 (PMID: 22973895)

L1CAM is a glycoprotein. Full length 250-kDa L1CAM and cleaved 150-kDa are observed. The molecular weight observed is consistent with what have been described in literature (PMID: 20840789, PMID: 23205105).

Exposure time: 114 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab272733)

All lanes:
Western blot - Anti-L1CAM antibody [EPR23338-106] (ab272733) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Rat brain tissue lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 4:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 140 kDa

Observed band size: 150 kDa, 250 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.