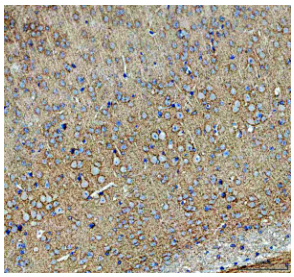
CD171 Antibody / L1 Cell Adhesion Molecule Antibody (RQ7089)

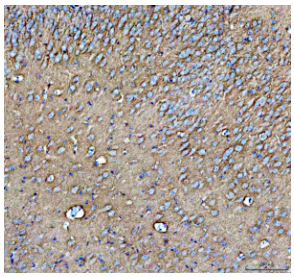
Catalog No.	Formulation	Size
RQ7089	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

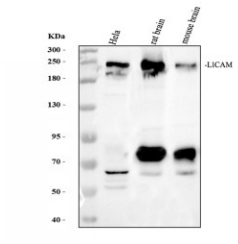
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P32004
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Immunohistocheistry (FFPE): 2-5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This CD171 Antibody / L1 Cell Adhesion Molecule Antibody is available for research use only.



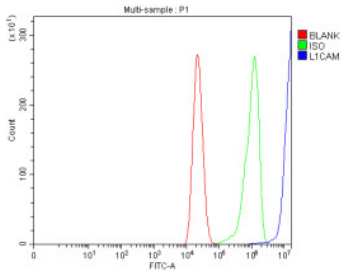
CD171 Antibody Mouse Brain Neuronal Tissue IHC. Immunohistochemistry staining of paraffin-embedded mouse brain tissue with CD171 Antibody / L1 Cell Adhesion Molecule Antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed in EDTA buffer, pH 8. Tissue sections were blocked with 10% goat serum and incubated with primary antibody overnight at 4oC, followed by peroxidase-conjugated goat anti-rabbit IgG and DAB detection. CD171 staining is observed in neuronal populations within the mouse brain tissue.



CD171 Antibody Rat Brain Neuronal Tissue IHC. Immunohistochemistry staining of paraffin-embedded rat brain tissue with CD171 Antibody / L1 Cell Adhesion Molecule Antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed in EDTA buffer, pH 8. Tissue sections were blocked with 10% goat serum and incubated with primary antibody overnight at 4oC, followed by peroxidase-conjugated goat anti-rabbit IgG and DAB detection. CD171 staining is observed in neuronal populations within the rat brain tissue.



CD171 Antibody Human, Mouse and Rat WB. Western blot analysis of human HeLa whole cell lysate, rat brain and mouse brain tissue lysates using CD171 Antibody / L1 Cell Adhesion Molecule Antibody at 0.5 ug/ml. Samples were separated by 10% SDS-PAGE under reducing conditions and transferred to nitrocellulose. L1CAM is detected at approximately 220 kDa, compared with a predicted molecular weight of approximately 140 kDa. The higher apparent molecular weight is consistent with extensive glycosylation of L1CAM. Additional lower molecular weight bands may reflect proteolytic processing of the protein.



CD171 Antibody Human Caco-2 Colorectal Cancer Cell FACS. Flow cytometry analysis of fixed and permeabilized human Caco-2 colorectal cancer cells using CD171 Antibody / L1 Cell Adhesion Molecule Antibody at 1 ug/1x10^6 cells. Cells were blocked with 10% normal goat serum and incubated with primary antibody for 30 min at 20oC, followed by DyLight 488-conjugated goat anti-rabbit IgG. The blue histogram represents CD171 antibody staining, green represents the isotype control, and red represents the blank control. The strong fluorescence shift demonstrates detection of CD171 in Caco-2 cells by flow cytometry.

Description

CD171 Antibody / L1 Cell Adhesion Molecule Antibody recognizes CD171, a transmembrane cell adhesion protein encoded by the L1CAM gene. Also known as L1CAM, NCAM-L1 and Neural Cell Adhesion Molecule L1, CD171 is a member of the immunoglobulin superfamily of cell adhesion molecules. The protein mediates interactions between cells and their surrounding environment and participates in signaling processes that regulate cellular adhesion, migration and morphology.

CD171 has particularly important functions in the nervous system. During neural development, L1CAM participates in neuronal migration, neurite extension, axon guidance and fasciculation. Homophilic interactions between L1CAM molecules, as well as interactions with other cell-surface and extracellular proteins, help developing neurons establish and maintain appropriate connections. These functions have made CD171 an important target for research into neuronal development, axonal organization and nervous system function.

The importance of L1CAM-mediated adhesion is demonstrated by genetic disorders resulting from pathogenic L1CAM variants. These disorders are collectively referred to as L1 syndrome and can include X-linked hydrocephalus, MASA syndrome and related neurological abnormalities. Studying CD171 can therefore provide insight into the molecular mechanisms connecting cell adhesion, neuronal migration and normal nervous system development.

CD171 is also widely investigated in cancer research. Altered L1CAM expression has been reported in multiple malignancies and has been associated with tumor cell adhesion, migration and invasion. These properties have generated interest in CD171 as a cell-surface marker for studying tumor biology and the cellular mechanisms associated with cancer progression. Its involvement in both neuronal development and tumor cell behavior reflects the broader importance of L1CAM-mediated adhesion and signaling in regulating cell movement.

A CD171 Antibody can be used to investigate L1 Cell Adhesion Molecule expression, neuronal development, cell

adhesion and migration, and the involvement of L1CAM in cancer biology.

CD171 is a cell-surface designation for L1CAM, a cell adhesion molecule with important roles in neuronal migration, axon development and tumor cell behavior; additional target information is available on the L1CAM Antibody page.

Application Notes

Optimal dilution of the CD171 Antibody / L1 Cell Adhesion Molecule Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids E223-Q1218) was used as the immunogen for the CD171 antibody.

Storage

After reconstitution, the CD171 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CD171 antibody, L1CAM antibody, L1 Cell Adhesion Molecule antibody, Neural Cell Adhesion Molecule L1 antibody, NCAM-L1 antibody, L1 antibody

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