Mouse CHL-1/L1CAM-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2147

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CHL-1/L1CAM-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 40% cross-reactivity with recombinant human CHL-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CHL−1/L1CAM−2 Ala25-Gln1043 (Leu227-Gln242 del, Ala243Ser) Accession # BAC30699
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

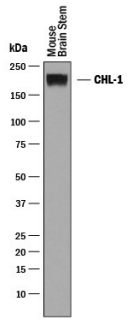
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	Perfusion fixed frozen sections of mouse brain (cortex)
Simple Western	2.5 µg/mL	See Below

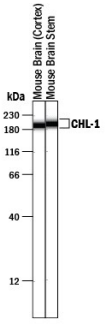
DATA

Western Blot



Detection of Mouse CHL-1/L1CAM-2 by Western Blot. Western blot shows lysates of mouse brain stem tissue. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse CHL-1/L1CAM-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2147) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for CHL-1/L1CAM-2 at approximately 200 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Mouse CHL-1/L1CAM-2 by Simple Western™. Simple Western lane view shows lysates of mouse brain (cortex) tissue and mouse brain stem tissue, loaded at 0.2 mg/mL. A specific band was detected for CHL-1/L1CAM-2 at approximately 196-201 kDa (as indicated) using 2.5 µg/mL of Goat Anti-Mouse CHL-1/L1CAM-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2147) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Close homolog of L1 (CHL-1), also known as cell adhesion L1-like (CALL) and L1 cell adhesion molecule 2 (L1CAM-2), belongs to the L1 subfamily of immunoglobulin (Ig) superfamily cell adhesion molecules, which also includes L1, neurofascin and NgCAM-related cell adhesion molecule (NrCAM) (1-3). These molecules are type I transmembrane proteins that have 6 Ig-like domains and 4-5 fibronectin type III-like (FNIII) domains in their extracellular regions. They also share a highly conserved cytoplasmic region of approximately 110 amino acid (aa) residues containing an ankyrin-binding site. CHL-1 is expressed as a highly glycosylated 185 kDa transmembrane protein by subpopulations of neurons and glia of the central and peripheral nervous system (4, 5). Ectodomain shedding via the metalloprotease-disintegrin ADAM8 releases 165 kDa and 125 kDa soluble CHL-1 fragments, which can diffuse away to function at distant sites (6). CHL-1 is not capable of homotypic interactions, but an extracellular binding partner of CHL-1 has not been identified (4). Human *CHL1* has been mapped to chromosome 3p26 and is a candidate gene for 3p$^-$ syndrome characterized by mental impairment (7). A missense *CHL1* polymorphism associated increased risk of schizophrenia, has also been reported (8). The functional importance of CHL-1 in the nervous system is also evident in CHL-1 deficient mice, which display behavioral abnormalities and show misguided axons within the hippocampus and olfactory tract (9). Enhanced ectodomain-shedding of CHL-1 is also observed in Wobbler mice, the neurodegenerative mutant mice (6). *In vitro*, soluble or substrate-coated CHL-1 promotes neurite outgrowth and neuronal survival of both cerebellar and hippocampal neurons. Cell surface CHL-1 interacts with integrins in *cis* to potentiate integrin-dependent cell migration toward extracellular matrix proteins (10). For this enhanced cell motility, CHL-1 linkage to the actin cytoskeleton via interaction between ankyrin and the CHL-1 cytoplasmic region is required.

References:

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