Human CHL-1/L1CAM-2 Alexa Fluor® 750-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 316223

Catalog Number: FAB2126S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CHL-1/L1CAM-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse CHL-1 is observed.
Source	Monoclonal Rat IgG_1 Clone # 316223
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CHL-1/L1CAM-2 Ile25-Gln1096 Accession # NP_006605
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Close homolog of L1 (CHL-1), also known as cell adhesion L1-like (CALL) and L1 cell adhesion molecule 2 (L1-CAM2), belongs to the L1 subfamily of the Ig superfamily cell adhesion molecules, which also include 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 shared a highly conserved cytoplasmic region of approximately 110 amino acids (aa) 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 with an increased risk of schizophrenia has 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.

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