Human NGL-1/LRRC4C Antibody

Monoclonal Mouse IgG_1 Clone # 755720

Catalog Number: MAB4899

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NGL-1/LRRC4C in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) LRRC4 or rhNGL-3/LRRC4B is observed.
Source	Monoclonal Mouse IgG_1 Clone # 755720
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human NGL-1/LRRC4C Gln45-Lys527 (predicted) Accession # Q9HCJ2
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.

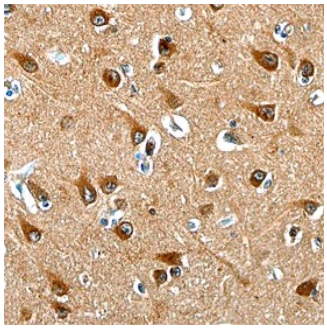
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



NGL-1/LRRC4C in Human Spinal Cord. NGL-1/LRRC4C was detected in immersion fixed paraffin-embedded sections of human spinal cord using Mouse Anti-Human NGL-1/LRRC4C Monoclonal Antibody (Catalog # MAB4899) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to the dorsal horn. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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.

BACKGROUND

Human NGL-1 (Netrin-G1 ligand; gene name LRRC4C) is a 67 kDa (predicted for mature protein), type I transmembrane cell adhesion molecule that is a member of the NGL family of proteins (1, 2). It is synthesized from a precursor that is 640 amino acids (aa) in length that contains a 44 aa signal sequence, a 483 aa extracellular region, a 21 aa transmembrane region, and a short cytoplasmic tail of 92 aa. The extracellular region of NGL-1 consists of nine leucine-rich repeats (LRRs) that are flanked by LRR N-terminal and LRR C-terminal domains, and followed by an Ig-like C2-type domain (1, 2). The cytoplasmic region contains a C-terminal Glu-Thr-Gln-Ile sequence that corresponds to a potential PDZ (postsynaptic density-95/discs large/zona occludens-1) domain-binding motif (1, 2). Human NGL-1 shares 99.7% aa sequence identity with mouse NGL-1. Mouse NGL-1 is highly expressed in the developing cerebral cortex and the striatum at embryonic day 14 (1). Postnatally, NGL-1 is expressed exclusively in the brain, with the highest expression found in the cerebral cortex as a whole, and in individual neocortical areas such as the frontal, parietal and occipital lobes (1). Moderate expression of NGL-1 occurs in the putamen, amygdala, hippocampus and medulla oblongata (1). Weak expression is found in the caudate nucleus and thalamus (1). Functionally, membrane-bound cell-surface NGL-1 binds to netrin-G1 specifically through its LRR region, and in the developing brain, may promote neurite outgrowth of thalamocortical axons (1-4).

References:

1. Lin, J.C. *et al.* (2003) Nat. Neurosci. **6**:1270.
2. Kim, S. *et al.* (2006) Nat. Neurosci. **9**:1294.
3. Chen, Y. *et al.* (2006) Brain Res. Rev. **51**:265.
4. Nishimura-Akiyoshi, S. *et al.* (2007) Proc. Natl. Acad. Sci. U.S.A. **104**:14801.

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