

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human NGL-1/LRRC4C in Western blots. |
| Source | Polyclonal Sheep IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human NGL-1/LRRC4C Gln45-Lys527 Accession # Q9HCJ2 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details. |

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 | 0.1 µg/mL | Recombinant Human NGL-1/LRRC4C (Catalog # 4899-NR) |

PREPARATION AND STORAGE

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|--------------------------------|---|
| 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. |
| Stability & Storage | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> 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) 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 is 99.7% aa identical to 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). Little is known about NGL-1's function at later stages.

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.