

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived			
	Mouse Netrin-1 (Val22-Ala603) Accession # AAC52971	IEGR	GGGSGGGSGGGS	10-His tag
	N-terminus			C-terminus

**N-terminal Sequence** Val22

**Analysis**

**Predicted Molecular Mass** 68.2 kDa

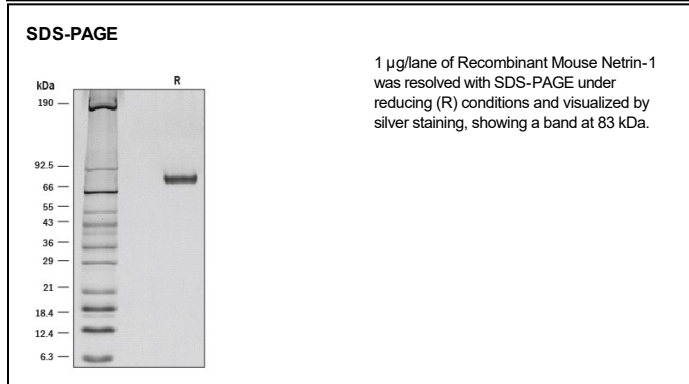
**SPECIFICATIONS**

<b>SDS-PAGE</b>	83 kDa, reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. Immobilized recombinant rat UNC5H2 Fc Chimera at 5 µg/mL (100 µL/well) can bind Recombinant Mouse Netrin-1 with a linear range of 3-200 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS and EDTA with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**



#### BACKGROUND

Mouse Netrin-1 is a member of the laminin-related family of axon-guidance molecules, collectively referred to as Netrins (*netr* is Sanskrit for "one who guides"). The molecule's cDNA encodes a 603 amino acid (aa) protein precursor that has structural similarity to the N-terminal  $\gamma$ -chain of laminin. It contains a globular domain, three EGF repeats, and a C-terminal heparin-binding domain. Mouse Netrin-1 shares 52% aa identity with mouse Netrin-3, and 98% and 87% aa identity with human and chicken Netrin-1, respectively. Cells reported to express Netrin-1 in the embryo include cells of the floor plate, ventricular zone of the spinal cord, the brain, the ganglionic eminence, and parts of the diencephalon. Netrins were first identified for promoting the outgrowth of commissural axons and are also involved in helping migrating cells and axonal growth cones navigate to their targets. Netrins can provide both attractive and repulsive cues to neurons, depending on the receptors present and cellular context. In the adult, Netrin-1 is likely involved in axon regeneration in peripheral nerves. Netrin-1 has also been shown to be expressed outside of the nervous system and to be involved in development of such tissues as the pancreas, lung, bowel, bone and mammary gland. In non-neural organogenesis, Netrin-1 provides an adhesive rather than guidance function. The DCC (deleted in colorectal carcinoma), Neogenin, the UNC5 family of receptors, and the adenosine A2b receptors are proposed to be functional receptors for Netrin-1 (1-7).

#### References:

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2. Hedgecock, E. and C. Norris (1997) *Trends Genet.* **13**:251.
3. Kappler, J. *et al.* (2000) *Biochem. Biophys. Res. Commun.* **271**:287.
4. Madison, R. *et al.* (2000) *Exp. Neurology* **161**:563.
5. Srinivasan, K. *et al.* (2003) *Dev. Cell* **4**:371.
6. Livesey, F.J. (1999) *Cell Mol. Life Sci.* **56**:62.
7. Corset, V. *et al.* (2000) *Nature* **407**:747.

#### PRODUCT SPECIFIC NOTICES

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U.S. Patent # 5,565,331, 6,096,866, 6,017,714, 6,309,638, 6,670,451, and other U.S. and international patents pending.