

**DESCRIPTION**

<b>Source</b>	Chinese Hamster Ovary cell line, CHO-derived mouse Plexin B3 protein His35-Gln1245, with a C-terminal 6-His tag Accession # Q9QY40.2
<b>N-terminal Sequence Analysis</b>	His35 & Gln140
<b>Predicted Molecular Mass</b>	131 kDa

**SPECIFICATIONS**

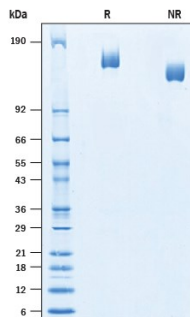
<b>SDS-PAGE</b>	150-170 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Mouse Plexin B3 His tag (Catalog # 10220-PC) is immobilized at 2 µg/mL, 100 µL/well, Recombinant Mouse Semaphorin 4D/CD100 Fc Chimera (Catalog # 5235-S4B) binds with an ED <sub>50</sub> of 0.8-4.8 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, 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 with Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<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**

**SDS-PAGE**



2 µg/lane of Recombinant Mouse Plexin B3 His-tag Protein (Catalog # 10220-PC) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 150-170 kDa.

**BACKGROUND**

Plexin B3 is a type I transmembrane glycoprotein that belongs to the Plexin family of semaphorin receptors which are critical in axon guidance, (1, 2). There are nine mammalian plexins divided into 4 classes all sharing a common architecture: An extracellular domain (ECD) that binds the semaphorin ligand, a single transmembrane domain and a conserved ~600 amino acid (aa) cytoplasmic region (1, 2). The ECD of mouse Plexin B3 consists of a Sema domain, three plexin-semaphorin-integrin (PSI) domains and four Ig-like, plexins, transcription factors (IPT) domains and shares 81% and 95% aa identity with human and rat Plexin B3, respectively. Alternative splicing of Plexin B3 results in at least three different isoforms (3). Plexin B3 is predominantly expressed in the brain and is a highly potent stimulator of neurite outgrowth (3). Plexin B3 and its identified ligand, the transmembrane semaphorin Sema5A, are both expressed during differentiation and migration of central nervous system oligodendrocytes (4 - 6). Plexin B3 is also expressed in peripheral cells such as fibroblasts, epithelial and primary endothelial cells. Plexin B3 activation by sema 5A mediates functional responses in these cells (4). Expression of Sema 5A and plexin B3 in gastric carcinoma contributes to invasion and metastasis of gastric carcinoma (7).

**References:**

1. Negishi, M. *et al.* (2005) *Cell. Mol. Life Sci.* **62**:1363.
2. Tamagnone, L. *et al.* (1999) *Cell* **99**:71.
3. Hartwig, C. *et al.* (2005) *BMC Neurosci.* **6**:53.
4. Artigiani, S. *et al.* (2004) *EMBO Rep.* **5**:710.
5. Goldberg, J.L. *et al.* (2004) *J. Neurosci.* **24**:4989.
6. Worzfeld, T. *et al.* (2004) *Eur. J. Neurosci.* **19**:2622.
7. P.G. *et al.* (2009) *World. J. Gastroenterol.* **15**(22):2800.