Recombinant Mouse Plexin B2

Catalog Number: 6836-PB

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived

Mouse Plexin B2 (Leu20 - Trp1029) Accession # NP_001152993	HPGGGSGGGSGGGS	6-His tag

N-terminus C-terminus

N-terminal Sequence Analysis: Leu20

Predicted Molecular Mass: 112 kDa

SPECIFICATIONS

SDS-PAGE: 135-155 kDa, reducing conditions

Activity: Measured by its binding ability in a functional ELISA.
When Recombinant Mouse Plexin B2 is coated at 5 µg/mL, Recombinant Mouse Semaphorin 4D/CD100 Fc Chimera (Catalog # 5235-S4) binds with an apparent K_D < 10 nM.

Optimal dilutions should be determined by each laboratory for each applications.

Endotoxin Level: <0.01 EU per 1 µg of the protein by the LAL method.

Purity: >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 400 µg/mL in PBS.

Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Plexin B2 is a 240 kDa type I transmembrane (TM) glycoprotein of the Plexin B family of semaphorin receptors (1, 2). The mouse Plexin B2 cDNA encodes 1842 amino acids (aa) that include a 19 aa signal sequence, a 1182 aa extracellular domain (ECD), a 21 aa TM domain, and a 620 aa cytoplasmic region. The ECD contains one semaphorin domain (aa 20 - 468) and three IPT repeats (aa 806 - 1096). The ECD may be cleaved into two subunits, a 170 kDa α-chain (aa 20 - 1168) and an 80 kDa TM β-chain, that remain noncovalently linked (1). Multiple splice variants may exist. Within aa 20 - 1029 in the ECD, mouse Plexin B2 shares 82%, 93%, 80% and 79% aa identity with human, rat, canine and bovine Plexin B2, respectively. The B Plexins (B1, B2 and B3) share approximately 40% aa identity with each other. Plexin B2 mRNA is expressed in proliferating cerebellar granule cell progenitors, neuroepithelium, developing neurons, growth plate chondrocytes, tooth bud inner enamel epithelium, glomeruli and mesenchyme of the developing kidney, and in germinal center B lymphocytes when T cell help is present (3 - 7). Plexin B2 is often co-expressed with Plexin B1, and the two may form heterodimers (1, 4, 6). Genetic deletion of mouse Plexin B2 results in defects in proliferation and migration of cerebellar granule cells, abnormal development of the neural tube and disorganization of the embryonic brain; these defects are not seen when Plexin B1 is deleted (8 - 10). In adults, Plexin B2 is expressed in specialized vascular endothelia, pancreatic islets of Langerhans, and adrenal glands (11). Plexin B2 serves as a receptor for type 4 semaphorins, especially Sema4C and Sema4G (8 - 12). B Plexins, including Plexin B2, can bind the scatter factor receptors, Met and Ron, and activate them upon semaphorin engagement (1, 13).

References:

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