Recombinant Mouse Ephrin-B1 Fc Chimera

Catalog Number: BT473

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived

Human Ephrin-B1 (Lys30-Ser229) Accession # Q544L9	IEGRMD	Human IgG_1 (Pro100-Lys330)	6-His tag

N-terminus C-terminus

N-terminal Sequence Analysis Lys30

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 49.2 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 60 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Immobilized recombinant mouse EphB3 Fc Chimera at 2 µg/mL (100 µL/well) can bind biotinylated Recombinant Mouse Ephrin-B1 Fc Chimera with a linear range of 0.078-1.25 ng/mL.
Optimal dilutions should be determined by each laboratory for each application.

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

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute with sterile PBS at 100 µg/mL.

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

Ephrin-B1, also known as Elk Ligand, LERK2, and Eplg2, is an approximately 45 kDa member of the Ephrin-B family of transmembrane ligands that bind and induce the tyrosine autophosphorylation of Eph receptors. The extracellular domains (ECD) of Ephrin-B ligands are structurally related to GPI-anchored Ephrin-A ligands. Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, and cancer progression. Ephrin-B1 preferentially interacts with receptors in the EphB family. The binding of Ephrin-B1 to EphB proteins also triggers reverse signaling through Ephrin-B1 (1, 2). Mature mouse Ephrin-B1 consists of a 212 amino acid (aa) ECD, a 21 aa transmembrane segment, and an 88 aa cytoplasmic domain (3, 4). Within the ECD, mouse Ephrin-B1 shares 94% and 98% aa sequence identity with human and rat Ephrin-B1, respectively. Ligation by EphB2 enhances shedding of a 35 kDa fragment of the Ephrin-B1 ECD (5). The residual membrane-bound portion is then cleaved by gamma-secretase to release the intracellular domain (6). Ephrin-B1 also associates *in cis* with Claudin-1, -4, and -5 (7, 8). It is expressed on glomerular podocyte slit diaphragms, developing thymocytes, peripheral T cells, monocytes, macrophages, vascular endothelial cells, cardiomyocytes, osteoclasts, and luteinizing granulosa cells in the ovary (8-13). In the developing nervous system, Ephrin-B1 plays a role in cellular migration, axon guidance, and presynaptic development (14-16). It also regulates developing thymocyte survival, monocyte migration, osteoclast differentiation and function, cardiac muscle morphogenesis, and tumorigenesis (5, 8, 10-12). Ephrin-B1 is up-regulated on reactive astrocytes and on macrophages and T cells found in atherosclerotic plaques (11, 17).

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