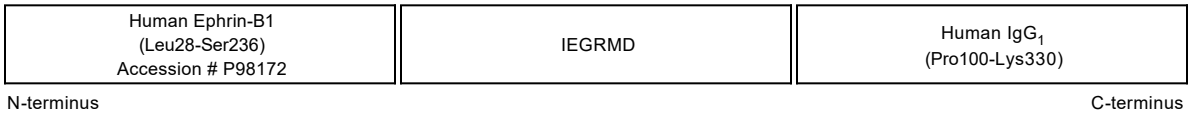
Recombinant Human Ephrin-B1 Fc Chimera

Catalog Number: 7654-EB

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Leu28
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	49.5 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	62-67 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse EphB3 Fc Chimera (Catalog # 432-B3) is coated at 2 µg/mL, Recombinant Human Ephrin-B1 Fc Chimera binds with an apparent K_D <0.2 nM.
Endotoxin Level	<0.10 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

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 human Ephrin-B1 consists of a 210 amino acid (aa) ECD, a 21 aa transmembrane segment, and an 88 aa cytoplasmic domain (3, 4). Within the ECD, human Ephrin-B1 shares approximately 94% aa sequence identity with mouse and rat Ephrin-B1. 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).

References:

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