Recombinant Human Ephrin-B3 Fc Chimera

Catalog Number: 7924-EB

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human Ephrin-B3 protein

N-terminal Sequence Analysis	Leu28
Structure / Form	Disulfide-linker homodimer
Predicted Molecular Mass	48.3 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	57-61 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human EphB3 Fc Chimera (Catalog # 432-B3) is coated at 2 µg/mL, Recombinant Human Ephrin-B3 Fc Chimera binds with an apparent K_d < 0.4 nM.
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

Ephrin-B3, also known as Elk-L3, LERK8, Eplg8, NLERK-2, and EFL6, is an approximately 50 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-B3 preferentially interacts with receptors in the EphB family and also with EphA4. The binding of Ephrin-B3 to Eph proteins also triggers reverse signaling through Ephrin-B3 (1, 2). Mature human Ephrin-B3 consists of a 199 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 93 aa cytoplasmic domain (3, 4). Within the ECD, human Ephrin-B3 shares 96% and 97% aa sequence identity with mouse and rat Ephrin-B3, respectively. Ephrin-B3 is expressed on oligodendrocytes and neurons in the hippocampus and along the midline of the spinal cord (5-9). It is up-regulated in glioma and promotes tumor cell invasion and migration (10). Ephrin-B3 functions as a repulsive axon guidance molecule by inducing growth cone collapse, neurite retraction, and axon pruning (5-8). Its repulsive effect along the spinal cord midline restricts motor neuron axons to their ipsilateral sides, thereby maintaining the independence of voluntary left side/right side movements (8, 9). Ephrin-B3 plays a role in the regulation of excitatory synapse density and synaptic maturation (6, 11, 12). It also functions as a cellular receptor for Nipah virus (13) and can induce the migration of memory B cells (14).

References:

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