

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived mouse Ephrin-B2 protein			
	Mouse Ephrin-B2 (Arg27-Ala227) Accession # AAA82934	DIEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)	6-His tag
	N-terminus		C-terminus	
<b>N-terminal Sequence Analysis</b>	Arg27			
<b>Structure / Form</b>	Disulfide-linked homodimer			
<b>Predicted Molecular Mass</b>	49.6 kDa (monomer)			

**SPECIFICATIONS**

<b>SDS-PAGE</b>	60-65 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to compete with Biotinylated Recombinant Mouse Ephrin-B2 Fc Chimera (Catalog # BT496) for binding with immobilized Recombinant Mouse EphB2 Fc Chimera (Catalog # 467-B2) in a functional ELISA assay. <b>Optimal dilutions should be determined by each laboratory for each application.</b>
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, 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. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in sterile 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>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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>

**BACKGROUND**

Ephrin-B2, also known as Htk-L, ELF-2, LERK-5, and NLERK-1, is a 40 kDa member of the Ephrin-B family of transmembrane ligands that bind and induce the tyrosine autophosphorylation of Eph receptors. The extracellular domains 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-B2 preferentially interacts with receptors in the EphB family (1, 2). Mature mouse Ephrin-B2 consists of a 204 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and an 83 aa cytoplasmic domain [Cerretti 1197, Bergemann 4921, Bennett 1866]. Within the ECD, mouse Ephrin-B2 shares 97% and 98% aa sequence identity with human and rat Ephrin-B2, respectively. Ephrin-B2 is expressed presynaptically on neurons (6, 7). It promotes presynaptic development, EphB2 shedding, axonal growth cone collapse, and neurite repulsion, and also regulates inflammatory and neuropathic pain (6-8). Ephrin-B2 is expressed by vascular mural cells and arterial vascular and lymphatic endothelium (9, 10). It exerts proliferative and migratory effects on these cells during angiogenesis and lymphangiogenesis in part by regulating the signaling activity of VEGF R2 and VEGF R3 (8-11). Ephrin-B2 plays a role in the immune response by mediating monocyte extravasation and T cell costimulation (12, 13). It is up-regulated in invasive cancers and promotes tumor cell migration, invasion, and tumor angiogenesis (14-16). It functions as a cellular entry receptor for Hendra and Nipah viruses (17). Ephrin-B2 is also important for the separation of the urinary and intestinal tracts during development (18).

**References:**

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