

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Human Ephrin-A1 (Met1-Ser182) Accession # P20827	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Asp19		
Predicted Molecular Mass	46 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	55-60 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human (rh) EphA2 (Catalog # 3035-A2) is coated at 2 µg/mL (100 µL/well), the concentration of rhEphrin-A1 Fc Chimera that produces 50% of the optimal binding response is found to be approximately 0.6-3 ng/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 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. <ul style="list-style-type: none"> ● 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-A1, also known as B61 and LERK-1, is a member of the Ephrin-A family of GPI-anchored ligands that bind and induce the tyrosine autophosphorylation of Eph receptors. Ephrin-A ligands are structurally related to the extracellular domains of the transmembrane Ephrin-B ligands. Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, and cancer progression (1, 2). Human Ephrin-A1 is synthesized with an 18 amino acid (aa) signal peptide, a 164 aa mature chain, and a 23 aa C-terminal propeptide which is removed prior to GPI linkage of Ephrin-A1 to the membrane (3, 4). It can also be released as a soluble molecule (3, 5, 6). The mature 21 - 25 kDa human Ephrin-A1 shares 85% aa sequence identity with mouse and rat Ephrin-A1. Alternate splicing generates an additional isoform that lacks 22 aa in the juxtamembrane region (7). This short isoform is also expressed on the cell surface and exhibits weakened binding to EphA2 (7). Ephrin-A1 is widely expressed on endothelial and epithelial cells, particularly in the lung, intestine, liver, and skin (4, 8). It is expressed on resting CD4⁺ T cells but is down-regulated following activation (9, 10). Ligation of Ephrin-A1 on CD4⁺ T cells inhibits cell proliferation and activation, although soluble Ephrin-A1 can promote T cell chemotaxis (9, 10). In cancer, Ephrin-A1 is expressed by tumor cells as well as on the tumor-associated vasculature (5, 6, 11). It inhibits tumor cell proliferation and migration but also supports tumor growth by promoting angiogenesis (12 - 14). Soluble Ephrin-A1 additionally promotes neuronal survival and neurite extension (15).

References:

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