

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Human Ephrin-A2 (Glu27-Asn188) Accession # O43921	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Starts at Glu27		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	45.1 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	55-60 kDa, reducing conditions
Activity	Measured by its ability to inhibit proliferation of PC-3 human prostate cancer cells. The ED ₅₀ for this effect is 5-25 ng/mL.
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 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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-A2, also known as ELF-1, HEK7-L, LERK-6, and EPLG6, is an approximately 20 kDa member of the GPI-linked Ephrin-A family of proteins that bind and induce the tyrosine autophosphorylation of Eph receptors. In particular, Ephrin-A2 preferentially interacts with receptors of the EphA family of proteins. Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, axon guidance and cancer progression. (1-3). Human Ephrin-A2 is synthesized as a 213 amino acid (aa) preproprecursor that contains a 24 aa signal peptide, a 164 aa mature chain, and a 25 aa C-terminal propeptide that is removed prior to GPI linkage of Ephrin-A2 to the membrane (4, 5). The mature region is structurally related to the extracellular domains of the transmembrane Ephrin-B ligands (1, 3), and shares 93% aa sequence identity with mouse and rat Ephrin-A2. Ephrin-A2 is expressed in discrete regions of the developing nervous system and limb buds (6-9). Its distribution complements the pattern of Eph receptor expression, and this plays an important role in tissue morphogenesis (9-11). Ephrin-A2 exerts an axon repulsive signal which is important for the accurate pathfinding of retinal ganglion cell axons to the tectum and hippocampal axons to the lateral septum (10, 12). Its up-regulation on astrocytes at sites of optic nerve damage may prevent re-innervation by retinal ganglion cells (13). Ephrin-A2 is also expressed on neural progenitor cells in the subventricular zone (SVZ). It interacts with EphA7, triggering reverse signaling through Ephrin-A2 and inhibition of progenitor cell proliferation (10). In the developing limbs, Ephrin-A2 regulates cartilage morphogenesis and the projection of motoneuron axons (8, 9, 14).

References:

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