

## Ephrin-A1/EFNA1 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P72662
Synonyms:	Ephrin-A1; LERK-1; EFNA1; EPLG1; TNFAIP4
Species:	Human
Source:	HEK293
Accession:	P20827 (D19-S182)
Gene ID:	1942
Molecular Weight:	55-60 kDa

### PROPERTIES

AA Sequence	D R H T V F W N S S    N P K F R N E D Y T    I H V Q L N D Y V D    I I C P H Y E D H S V A D A A M E Q Y I    L Y L V E H E E Y Q    L C Q P Q S K D Q V    R W Q C N R P S A K H G P E K L S E K F    Q R F T P F T L G K    E F K E G H S Y Y Y    I S K P I H Q H E D R C L R L K V T V S    G K I T H S P Q A H    D N P Q E K R L A A    D D P E V R V L H S I G H S
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>Ephrin-A1/EFNA1 Protein is a cell surface GPI-bound ligand that interacts with Eph receptors, a family of receptor tyrosine kinases crucial for migration, repulsion, and adhesion during neuronal, vascular, and epithelial development. It binds promiscuously to Eph receptors on adjacent cells, initiating contact-dependent bidirectional signaling. Ephrin-A1/EFNA1 Protein plays a significant role in angiogenesis and tumor neovascularization by recruiting VAV2, VAV3, and PI3-kinase p85 subunit through phosphorylated EPHA2, leading to RAC1 GTPase activation and vascular endothelial cell migration and assembly. Moreover, it exhibits anti-oncogenic effects in tumor cells by activating and down-regulating EPHA2 through tyrosine phosphorylation, resulting in its internalization and degradation. Furthermore, Ephrin-A1/EFNA1 Protein acts as a</p>
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negative regulator in glioma tumorigenesis by down-regulating EPHA2 and FAK. It can induce the collapse of embryonic neuronal growth cones and regulate dendritic spine morphogenesis. Ephrin-A1/EFNA1 Protein exists as a monomer and homodimer, and it forms heterodimers with EPHA2. It binds to several receptor tyrosine kinases including EPHA1, EPHA2, EPHA3, EPHA4, EPHA5, EPHA6, and EPHA7, albeit with low affinity.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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