

Ephrin-A1/EFNA1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73024
Synonyms:	Ephrin-A1; LERK-1; TNF alpha-induced protein 4; EFNA1; EPLG1; TNFAIP4
Species:	Mouse
Source:	HEK293
Accession:	P52793 (D19-S182)
Gene ID:	13636
Molecular Weight:	Approximately 27 kDa

PROPERTIES

AA Sequence	<pre> M E F L W A P L L G L C C S L A A A D R H I V F W N S S N P K F R E E D Y T V H V Q L N D Y L D I I C P H Y E D D S V A D A A M E R Y T L Y M V E H Q E Y V A C Q P Q S K D Q V R W N C N R P S A K H G P E K L S E K F Q R F T P F I L G K E F K E G H S Y Y Y I S K P I Y H Q E S Q C L K L K V T V N G K I T H N P Q A H V N P Q E K R L Q A D D P E V Q V L H S I G Y S </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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 ₂ O.
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>The Ephrin-A1/EFNA1 protein, a cell surface GPI-bound ligand for Eph receptors, serves a pivotal role in migration, repulsion, and adhesion during neuronal, vascular, and epithelial development. It binds promiscuously to Eph receptors on adjacent cells, instigating contact-dependent bidirectional signaling. Crucial in angiogenesis and tumor neovascularization, EFNA1-induced RAC1 GTPase activation and vascular endothelial cell migration depend on the recruitment of VAV2, VAV3, and the PI3-kinase p85 subunit by phosphorylated EPHA2. Notably, EFNA1 exerts anti-oncogenic effects by activating and down-regulating EPHA2 through induced tyrosine phosphorylation, leading to internalization and degradation. In gliomas, it acts as a negative regulator, down-regulating EPHA2 and FAK and thus playing a role in suppressing tumorigenesis. EFNA1 can</p>
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induce the collapse of embryonic neuronal growth cones and regulate dendritic spine morphogenesis. Existing as both a monomer and homodimer, it forms heterodimers with EPHA2 and binds to a spectrum of receptor tyrosine kinases including EPHA1, EPHA3, EPHA4, EPHA5, EPHA6, and EPHA7.

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

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