

Ephrin-A5/EFNA5 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P73013
Synonyms:	Ephrin-A5; AL-1; EPH-related receptor tyrosine kinase ligand 7; LERK-7; EFNA5; EPLG7
Species:	Rat
Source:	HEK293
Accession:	P97605 (Q21-E202)
Gene ID:	116683
Molecular Weight:	Approximately 55 kDa

PROPERTIES

AA Sequence	<pre> M L H V E M L T L L F L V L W M C V F S Q D P G S K V V A D R Y A V Y W N S S N P R F Q R G D Y H I D V C I N D Y L D V F C P H Y E D S V P E D K T E R Y V L Y M V N F D G Y S A C D H T S K G F K R W E C N R P H S P N G P L K F S E K F Q L F T P F S L G F E F R P G R E Y F Y I S S A I P D N G R R S C L K L K V F V R P T N S C M K T I G V R D R V F D V N D K V E N S L E P A D D T V H E S A E P S R G E </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-A5/EFNA5 protein, a cell surface GPI-bound ligand for Eph receptors, plays a crucial role in neuronal, vascular, and epithelial development, where Eph receptors are essential for migration, repulsion, and adhesion. EFNA5 binds promiscuously to Eph receptors on adjacent cells, initiating contact-dependent bidirectional signaling, with forward signaling downstream of the receptor and reverse signaling downstream of the ephrin ligand. When bound to its cognate receptor, EFNA5 induces compartmentalized signaling within a caveolae-like membrane microdomain, requiring the activity of the Fyn tyrosine kinase. It activates the EPHA3 receptor to regulate cell-cell adhesion and cytoskeletal organization, and</p>
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in association with EPHA2, may play a role in shaping lens fiber cells and maintaining lens transparency. Additionally, EFNA5 stimulates axon fasciculation and mediates communication between pancreatic islet cells, regulating glucose-stimulated insulin secretion through its interaction with EPHA5. It is also a cognate ligand for EPHA7, influencing brain development by modulating cell-cell adhesion and repulsion. Furthermore, EFNA5 interacts with EPHA8, activating this receptor, and forms a ternary complex with EPHA3 and ADAM10, mediating extracellular domain shedding and regulating the internalization and function of the EFNA5-EPHA3 complex.

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

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