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

Cat. No.:	HY-P75232
Synonyms:	Ephrin-A5; AL-1; EPH-related receptor tyrosine kinase ligand 7; LERK-7; EFNA5; EPLG7
Species:	Mouse
Source:	HEK293
Accession:	O08543 (Q21-N203)
Gene ID:	13640
Molecular Weight:	Approximately 52 kDa

PROPERTIES

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.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	The Ephrin-A5/EFNA5 protein, a cell surface GPI-bound ligand for Eph receptors, plays a pivotal role in neuronal, vascular, and epithelial development, where Eph receptors are critical 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. This protein induces compartmentalized signaling within a caveolae-like membrane microdomain when bound to the extracellular domain of its cognate receptor, a process requiring the activity of the Fyn tyrosine kinase. EFNA5 activates the EPHA3 receptor, regulating cell-cell adhesion and cytoskeletal organization, and, in conjunction with EPHA2, potentially contributes to shaping lens fiber cells and maintaining lens transparency. It may actively stimulate axon fasciculation and mediate communication between pancreatic islet cells, influencing glucose-stimulated insulin secretion. As a cognate ligand for EPHA7, EFNA5 regulates brain development by modulating cell-cell adhesion and repulsion. It binds to the receptor tyrosine kinases EPHA2, EPHA3, and EPHB1 and forms a ternary complex with EPHA3 and ADAM10, mediating EFNA5 extracellular domain shedding by ADAM10, which in turn regulates the internalization and function of the EFNA5-EPHA3 complex. EFNA5 also binds to EPHB2 and interacts with EPHA8, activating the latter receptor.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA