EphB1 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P72997
Synonyms:	Ephrin type-B receptor 1; ELK; EK6; NET; EPHB1; EPHT2; HEK6
Species:	Human
Source:	Sf9 insect cells
Accession:	P54762 (R565-A984)
Gene ID:	2047
Molecular Weight:	Approximately 66 kDa

PROPERTIES

AA Sequence	R K R A Y S K E A V Y S D K L Q H Y S T G R G S P G M K I Y I D P F T Y E D P N E A V R E F A K E I D V S F V K I E E V I G A G E F G E V Y K G R L K L P G K R E I Y V A I K T L K A G Y S E K Q R R D F L S E A S I M G Q F D H P N I I R L E G V V T K S R P V M I I T E F M E N G A L D S F L R Q N D G Q F T V I Q L V G M L R G I A A G M K Y L A E M N Y V H R D L A A R N I L V N S N L V C K V S D F G L S R Y L Q D D T S D P T Y T S S L G G K I P V R W T A P E A I A Y R K F T S A S D V W S Y G I V M W E V M S F G E R P Y W D M S N Q D V I N A I E Q D Y R L P P P M D C P A A L H Q L M L D C W Q K D R N S R P R F A E I V N T L D K M I R N P A S L K T V A T I T A V P S Q P L L D R S I P D F T A F T T V D D W L S A I K M V Q Y R D S F L T A G F T S L Q L V T Q M T S E D L L R I G I T L A G H Q K K I L N S I H S M R V Q I S Q S P T A M A
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, 3 mM DTT, pH 8.0, 10% gly
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The EphB1 protein, a receptor tyrosine kinase, engages in promiscuous binding to transmembrane ephrin-B family ligands on adjacent cells, initiating contact-dependent bidirectional signaling. The downstream pathway originating from the receptor is known as forward signaling, while the signaling pathway downstream of the ephrin ligand is termed reverse signaling. Cognate/functional ephrin ligands for this receptor include EFNB1, EFNB2, and EFNB3. In nervous system development, EphB1 regulates retinal axon guidance by redirecting ipsilaterally ventrotemporal retinal ganglion cell axons at the optic chiasm midline, likely through repulsive interaction with EFNB2. In the adult nervous system, in conjunction with EFNB3, EphB1 governs chemotaxis, proliferation, and polarity of hippocampal neural progenitors. Beyond its role in axon guidance, EphB1 plays a crucial redundant role with other ephrin-B receptors in the development and maturation of dendritic spines and synapse formation. Additionally, EphB1 may regulate angiogenesis and, more generally, play a role in targeted cell migration and adhesion. Upon activation by EFNB1 and possibly other ephrin-B ligands, EphB1 activates the MAPK/ERK and JNK signaling cascades to regulate cell migration and adhesion, respectively. Moreover, EphB1 is involved in maintaining the pool of satellite cells (muscle stem cells) by promoting their self-renewal and reducing their activation and differentiation.

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

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