

## EphB1 Protein, Mouse (HEK293, His)

<b>Cat. No.:</b>	HY-P75748
<b>Synonyms:</b>	Ephrin type-B receptor 1; ELK; EK6; NET; EPHB1; EPHT2; HEK6
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	Q8CBF3 (M18-L539)
<b>Gene ID:</b>	270190
<b>Molecular Weight:</b>	Approximately 65-75 kDa

### PROPERTIES

#### AA Sequence

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M E E T L M D T R T   A T A E L G W T A N   P A S G W E E V S G   Y D E N L N T I R T
Y Q V C N V F E P N   Q N N W L L T T F I   N R R G A H R I Y T   E M R F T V R D C S
S L P N V P G S C K   E T F N L Y Y Y E T   D S V I A T K K S A   F W S E A P Y L K V
D T I A A D E S F S   Q V D F G G R L M K   V N T E V R S F G P   L T R N G F Y L A F
Q D Y G A C M S L L   S V R V F F K K C P   S I V Q N F A V F P   E T M T G A E S T S
L V I A R G T C I P   N A E E V D V P I K   L Y C N G D G E W M   V P I G R C T C K P
G Y E P E N S V A C   K A C P A G T F K A   S Q E A E G C S H C   P S N S R S P S E A
S P I C T C R T G Y   Y R A D F D P P E V   A C T S V P S G P R   N V I S I V N E T S
I I L E W H P P R E   T G G R D D V T Y N   I I C K K C R A D R   R S C S R C D D N V
E F V P R Q L G L T   E C R V S I S S L W   A H T P Y T F D I Q   A I N G V S S K S P
F P P Q H V S V N I   T T N Q A A P S T V   P I M H Q V S A T M   R S I T L S W P Q P
E Q P N G I I L D Y   E I R Y Y E K E H N   E F N S S M A R S Q   T N T A R I D G L R
P G M V Y V V Q V R   A R T V A G Y G K F   S G K M C F Q T L T   D D D Y K S E L R E
Q L
  
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**Biological Activity** Immobilized mouse EPHB1 10 µg/mL (100 µL/well) can bind mouse EFNB1, The ED<sub>50</sub> for this effect is 128.3 ng/mL.

**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.

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## DESCRIPTION

### Background

EphB1 protein is a receptor tyrosine kinase that binds to ephrin-B ligands on neighboring cells, resulting in contact-dependent bidirectional signaling. This receptor mediates both forward signaling and reverse signaling pathways. Its ligands include EFNB1, EFNB2, and EFNB3, which play important roles in various cellular processes. During nervous system development, EphB1 regulates retinal axon guidance and interacts with EFNB2. In the adult nervous system, it works together with EFNB3 to regulate chemotaxis, proliferation, and polarity of neural progenitors. EphB1 is also involved in dendritic spine maturation, synapse formation, angiogenesis, targeted cell migration, and adhesion. Activation by EFNB1 and other ephrin-B ligands activates MAPK/ERK and JNK signaling pathways, which regulate cell migration and adhesion. Additionally, EphB1 is important for maintaining the pool of muscle stem cells (satellite cells) by promoting self-renewal and reducing activation and differentiation.

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

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