

## Product datasheet for MC222976

### Ephb1 (NM\_173447) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ephb1 (NM_173447) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ephb1
Synonyms:	9330129L11; AW488255; C130099E04Rik; Cek6; Elk; Elkh; ENSMUSG00000074119; Hek6; Net
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC222976 representing NM_173447 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCTGGATTGCTTGCTGCTCTTCTCCTGGCATCTGCAGTGGCCGCGATGGAAGAGACATTGATGG  
ACACAAGGACAGCCACTGCAGAGTTGGGATGGACGGCCAACCCTGCCTCTGGGTGGGAAGAAGTCAGTGG  
CTATGATGAAAACCTGAACACCATCCGTAATACCAAGTGTGCAACGTCTTCGAACCCAACCAGAACAAC  
TGGCTGCTTACCACCTTTATCAACAGAAGGGGCGCCCATCGCATCTATACAGAGATGCGCTTCACTGTGA  
GGGACTGCAGCAGCCTTCCAATGTCCCAGGCTCCTGCAAGGAGACCTTCAACTTGTACTACTATGAGAC  
TGACTCTGTGATTGCCACCAAGAAGTCAGCCTTCTGGTCTGAAGCCCCCTACCTCAAAGTGGACACCATT  
GCTGCAGATGAGAGCTTCTCCCAGTGGATTTTGGGGGAAGGTTGATGAAAGTCAACACGGAAGTCAGGA  
GCTTTGGGCTCTTACTAGGAACGGTTTTTACCTCGCTTTCAGGATTATGGAGCCTGTATGCTCTCCT  
TTCTGTCCGTGTCTTCTTCAAAAAGTGTCCCAGCATCGTGCAGAAATTTGCAGTGTTCAGAAACCATG  
ACAGGAGCAGAGACACATCTCTGGTATTGCTCGGGGCACATGCATCCCAAATGCGGAAGAAGTGGATG  
TGCCCATAAAACCTACTGCAACGGAGATGGAGAGTGGATGGTGGCCATTGGGCGCTGTACCTGTAAGCC  
TGGCTATGAGCCTGAGAACAGCGTGGCCTGCAAGGCTGTCTGCGGGGACCTTCAAGGCCAGCCAGGAA  
GCTGAAGGCTGCTCCCCTGCCCTCCAACAGTGCCTCCCCTTCAAGGGCTCTCCCATCTGCACCTGCC  
GGACTGGCTATTACCGAGCTGACTTTGATCCACCAGAGGTGGCGTGTACTAGTGTCCCATCGGGTCTCG  
AAATGTCACTCCATCGTGAATGAGACATCTATTCTAGAGTGGCACCTCCAAGAGAGACTGGTGGG  
AGAGATGACGTGACGTACAACATCATCTGCAAGAAGTGGCAGCAGACCGCCGAGCTGCTCCCCTGCG  
ATGACAAATGTGGAGTTTGTCCCAGGCAACTGGGCTTGAAGTGTCTAGCAAGAGTCCCTTCCCCCA  
GGCCACACCCCGTACACCTTTGATATCCAGGCCATCAATGGAGTCTCTAGCAAGAGTCCCTTCCCCCA  
CAGCACGTCTGTCAACATCACCACAAACCAAGCTGCCCTCCACTGTTCTATCATGCACCAGGTCA  
GTGCCACCATGAGGAGCATCACCTTGTATGGCCTCAGCCGAGCAACCAATGGCATAATCCTGGACTA  
TGAGATCCGGTACTATGAGAAGGAACACAATGAGTTCAACTCTTCCATGGCCAGGAGCCAGACCAACACA



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GCACGTATCGATGGGCTACGGCCTGGCATGGTATACGTGGTCCAGGTGCGAGCTCGAACCGTGGCTGGCT  
 ATGGCAAGTTCAGTGGCAAGATGTGTTCCAGACTCTGACAGATGATGATTACAAGTCGGAGCTGAGAGA  
 GCAGCTACCCCTGATTGCTGGCTCGGCAGCAGCTGGAGTCGATTTGTTGTGTCTCTGGTGGCCATCTCT  
 ATGTCTGCAGCAGGAAACGAGCTTACAGCAAAGAGGCTGCGTACAGTGATAAGCTTCAACATTACAGCA  
 CAGGCCGAGGCTCCCCAGGGATGAAGATCTACATTGACCCATTCACTTATGAGGACCCCAATGAAGCCGT  
 CCGGGAATTTGCCAAGGAGATTGATGTATCTTTTGTGAAAATTGAAGAGGTCATCGGAGCAGGGGAGTTC  
 GCGGAGGTGTACAAGGGCCGTTTGAAGCTGCCAGGCAAGAGGAAATCTATGTGGCCATCAAGACCCTGA  
 AGGCTGGGTACTCAGAGAAACAGCGTCGGGATTTTCTGAGCGAGGCGAGCATCATGGGCCAGTTTGACCA  
 TCCCAACATCATTGCGCTGGAGGTGTCGTACCAAGAGCCGGCCTGTCATGATCATTACGGAGTTCATG  
 GAGAACGGCGCTTTAGACTCTTTCCTCCGGCAAATGATGGACAGTTCACCGTGATCCAGCTTGTGGGGA  
 TGCTGAGGGGCATCGCTGCTGGCATGAAGTACCTATCTGAGATGAATTATGTGCACCGGGACCTGGCTGC  
 TAGAAACATTCTGGTCAACAGCAACCTGGTGTGCAAAGTTTCTGACTTTGGTCTCTCTCGCTACCTCCAG  
 GATGACACCTCAGACCCACCTACACCAGCTCCTGGGAGGGAAGATCCCTGTGAGATGGACAGCTCCAG  
 AGGCCATCGCTACCGCAAGTTTACGTACGCCAGCGATGTCTGGAGCTATGGGATTGTGATGGGAAGT  
 GATGTCATTTGGAGAGAGACCTTACTGGGATATGTCCAATCAAGATGTCATCAATGCCATTGAGCAGGAT  
 TACCGGCTGCCTCCTCCTATGGACTGCCAGCTGCCCTGCACCAGCTCATGCTGGACTGTTGGCAGAAGG  
 ATCGCAATAGCCGGCCCCGTTTTGCAGAGATCGTCAACACCCTGGACAAGATGATCCGGAACCCAGCTAG  
 TCTCAAGACTGTGGCAACCATCACCGCTGTGCCTCCCAACCCCTGCTTGACCGCTCTATCCCAGACTTC  
 ACGGCCTTTACCACCGTGGATGACTGGCTAAGTGCCATCAAAATGGTCCAGTACAGGGACAGCTTCTCTCA  
 CCGCAGGCTTACCTCCCTTTCAGCTGGTACCCAGATGACATCAGAAGACCTCCTGAGAATAGGGGTAAC  
 CTTGGCAGGCCATCAGAAGAAGATTCTGAGTAGCATTCACTCAATGAGGGTCCAGATGAACCAGTACCA  
 TCGGTAATGGCGTGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM\_173447
- Insert Size:** 2955 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
- RefSeq:** [NM\\_173447.3](#), [NP\\_775623.3](#)
- RefSeq Size:** 4686 bp
- RefSeq ORF:** 2955 bp

Locus ID: 270190

UniProt ID: [Q8CBF3](#)

Cytogenetics: 9 F1

**Gene Summary:** Receptor tyrosine kinase which binds promiscuously transmembrane ephrin-B family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Cognate/functional ephrin ligands for this receptor include EFNB1, EFNB2 and EFNB3. During nervous system development, regulates retinal axon guidance redirecting ipsilaterally ventrotemporal retinal ganglion cells axons at the optic chiasm midline. This probably requires repulsive interaction with EFNB2. In the adult nervous system together with EFNB3, regulates chemotaxis, proliferation and polarity of the hippocampus neural progenitors. In addition to its role in axon guidance plays also an important redundant role with other ephrin-B receptors in development and maturation of dendritic spines and synapse formation. May also regulate angiogenesis. More generally, may play a role in targeted cell migration and adhesion. Upon activation by EFNB1 and probably other ephrin-B ligands activates the MAPK/ERK and the JNK signaling cascades to regulate cell migration and adhesion respectively. Involved in the maintenance of the pool of satellite cells (muscle stem cells) by promoting their self-renewal and reducing their activation and differentiation (PubMed:27446912).[UniProtKB/Swiss-Prot Function]  
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).