

Product datasheet for **MR226017**

Ephb1 (NM_001168296) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ephb1 (NM_001168296) Mouse Tagged ORF Clone
Tag:	Myc-DDK
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)



[View online »](#)

ORF Nucleotide Sequence:

>MR226017 representing NM_001168296
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCCCTGGATTGCTTGTCTCTTCTCCTGGCATCTGCAGTGGCCGGATGGAAGAGACATTGATGG
 ACACAAGGACAGCCACTGCAGAGTTGGGATGGACGGCCAACCCTGCCTCTGGGTGGGAAGAAGTCAGTGG
 CTATGATGAAAACCTGAACACCATCCGTACTTACCAAGTGTGCAACGCTTTCGAACCCAACCAGAACAAC
 TGGCTGCTTACCACCTTTATCAACAGAAGGGGCGCCCATCGCATCTATACAGAGATGCGCTTCACTGTGA
 GGGACTGCAGCAGCCTTCCAATGTCCCAGGCTCTGCAAGGAGACCTTCAACTTGTACTACTATGAGAC
 TGACTCTGTGATTGCCACCAAGAAGTCAGCCTTCTGGTCTGAAGCCCCCTACCTCAAAGTGGACACCATT
 GCTGCAGATGAGAGCTTCTCCAGGTGGATTTTGGGGAAAGTTGATGAAAGTCAACACGGAAAGTCAGGA
 GCTTTGGGCTCTTACTAGGAACGGTTTTTACCTCGCTTCCAGGATTATGGAGCCTGTATGTCTCTCTCT
 TTCTGTCCGTGTCTTCTCAAAAAGTGTCCCAGCATCGTGCAGAAATTTGCAAGTGTCCAGAAACCATG
 ACAGGAGCAGAGACACATCTCTGGTATTGCTCGGGGCACATGCATCCCAAATGCGGAAGAAGTGGATG
 TGCCCATAAAACCTACTGCAACGGAGATGGAGAGTGGATGGTGGCCATTGGGCGCTGTACTGTAAAGCC
 TGGCTATGAGCCTGAGAACAGCGTGGCCTGCAAGGCCTGTCTGCGGGGACCTTCAAGGCCAGCCAGGAA
 GCTGAAGGCTGCTCCACTGCCCTCCAACAGTCGCTCCCTTCCAGAGCGTCTCCCATCTGCACCTGCC
 GGACTGGCTATTACCGAGCTGACTTTGATCCACCAGAGGTGGCGTGTACTAGTGTCCCATCGGGTCTCTCG
 AAATGTCATCTCCATCGTGAATGAGACATCTATCATTCTAGAGTGGCACCTCCAAGAGAGACTGGTGGG
 AGAGATGACGTGACGTACAACATCATCTGCAAGAAGTCCGAGCAGACCAGCGCAGCTGCTCCCGCTGCG
 ATGACAATGTGGAGTTTGTCCCAGGCACTGGCTTACTGAGTGTGCTGTCTCCATCAGTAGCCTATG
 GGCCACACCCCGTACACCTTTGATATCCAGGCCATCAATGGAGTCTCTAGCAAGAGTCCCTTTCCCCCA
 CAGCACGTCTCTGCAACATCACCAAAAACCAAGCTGCCCTTCCACTGTTCTATCATGCACCAGGTCA
 GTGCCACCATGAGGAGCATCACCTTGTATGGCCTCAGCCGAGCAACCAATGGCATAATCCTGGACTA
 TGAGATCCGGTACTATGAGAAGGAACACAATGAGTTCAACTTCCATGGCCAGGAGCCAGACCAACACA
 GCACGTATCGATGGGCTACGGCTGGCATGGTATACGTGGTCCAGGTGCGAGCTCGAACCGTGGCTGGCT
 ATGGCAAGTTCAGTGGCAAGATGTGTTCCAGACTCTGACAGATGATGATTACAAGTCGGAGCTGAGAGA
 GCAGCTACCCCTGATTGTGGCTCGGCAGCAGCTGGAGTCGATTTGTTGTGTCTCTGGTGGCCATCTCT
 ATGTCTGCAGCAGGAAACGAGCTTACAGCAAAGAGGCTGCGTACAGTGATAAGCTTCAACATTACAGCA
 CAGGCCGAGGGGAGTTCCGGCAGGTGTACAAGGCCGTTTGAAGCTGCCAGGCAAGAGGGAAATCTATGT
 GGCCATCAAGACCTGAAGGCTGGTACTCAGAGAAAACAGCGTCGGGATTTTCTGAGCGAGGCGAGCATC
 ATGGGCCAGTTTGACCATCCCAACATCATTGCGCTGGAGGGTGTGCTCACCAAGAGCCGGCTGTATGA
 TCATTACGGAGTTCATGGAGAACGGCGCTTTAGACTCTTCTCCGGCAAAATGATGGACAGTTCACCGT
 GATCCAGCTTGTGGGGATGTGAGGGGCATCGTGTGGCATGAAGTACCTATCTGAGATGAATTATGTG
 CACCGGGACCTGGCTGTAGAAACATTTGGTCAACAGCAACCTGGTGTGCAAAGTTTCTGACTTTGGTC
 TCTCTCGTACCTCCAGGATGACACCTCAGACCCACCTACACCAGCTCCTTGGGAGGGAAGATCCCTGT
 GAGATGGACAGCTCCAGAGGCCATCGCCTACCGCAAGTTTACGTGAGCCAGCGATGTCTGGAGCTATGGG
 ATTGTGATGTGGGAAGTGTGATTTGGAGAGAGACCTTACTGGGATATGTCCAATCAAGATGTATCA
 ATGCCATTGAGCAGGATTACCGGCTGCCTCCTATGGACTGCCAGCTGCCCTGCACCAGCTCATGCT
 GGACTGTTGGCAGAAGGATCGCAATAGCCGGCCCCGTTTTGAGAGATCGTCAACACCCTGGACAAGATG
 ATCCGGAACCCAGCTAGTCTCAAGACTGTGGCAACCATCACCGCTGTGCCCTCCCAACCCCTGCTTGACC
 GCTCTATCCAGACTTACGGCCTTTACCACCGTGGATGACTGGCTAAGTGCATCAAAATGGTCCAGTA
 CAGGGACAGCTTCTCACCGCAGCTTACCTCCCTTCCAGCTGGTACCCAGATGACATCAGAAGACCTC
 CTGAGAATAGGGTAACCTTGGCAGGCCATCAGAAGAAGATTCTGAGTAGCATTCACTCAATGAGGGTCC
 AGATGAACCAAGTACCATCGGTAATGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR226017 representing NM_001168296
 Red=Cloning site Green=Tags(s)

```

MALDCLLLFLLASAVAAMEETLMDTRTATAELGWTANPASGWEEVSGYDENLNTIRTYQVCNVFEPNQNN
WLLTTFINRRGAHRIYTEMRFVTRDCSSLPNVPGSCKETFNLYYYETDSVIATKKSAFWSEAPYLKVDTI
AADEFSQVDFGGRLMKVNTEVRSFGPLTRNGFYLAFAQDYGACMSLLSVRVFFKKCPSIVQNFVFPETM
TGAESTSLVIARGTCIPNAEEVDVPIKLYCNGDGEWMPVIGRCTCKPGYEPENSVACKACPAGTFKASQE
AEGCSHCPSNSRSPSEASPICTCRTGYRADFPPEVACTSVPSGPRNVIIVNETSIIILEWHPPRETGG
RDDVTYNIIICKKCRADRRSCSRCDNVEFVPRQLGLTECRVSISSLWAHTPYTFDIQAINGVSSKSPFPF
QHVSVNITTNQAAPSTVPIMHQVSATMRSITLSWPQPEQNGIILDYEIRYYEKEHNEFNSSMARSQTNT
ARIDGLRPGMVVYVQVRARTVAGYGKFGKMFQTLDDDYKSELREQLPLIAGSAAAGVVFVSLVAIS
IVCSRKRAYSKEAAYSCLKHYSTGRGEFGEVYKGRLLKPGKREIYVAIKTLKAGYSEKQRRDFLSEASI
MGQFDHPNIIIRLEGVVTKSRPVMIIITFMENGALDSFLRQNDGQFTVIQLVGMLRGIAGMKYLSMNIV
HRDLAARNILVNSNLVCKVSDFGLSRYLQDDTSDPTYTSSLGGKIPVRWTAPEAIAYRKFTSASDVWSYG
IVMWEVMSFGERPYWMSNQDVINAIEQDYRLPPMDCPALHQLMLDCWQKDRNSRPRFAEIVNTLDKM
IRNPASLKTAVATITAVPSQPLDRSIPDFTAFTTVDWLSAIKMOVYRDSFLTAGFTSLQLVTQMTSEDL
LRIGVTLAGHQKILSSIHSRVMQMNQSPSVMA
    
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9002_h10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

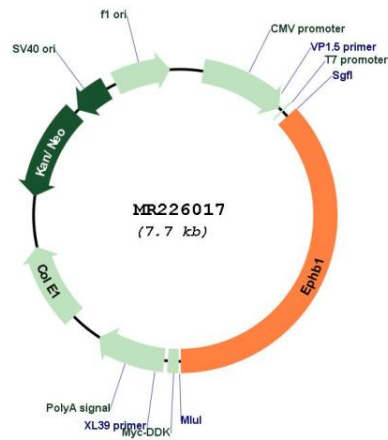
ACCN: NM_001168296

ORF Size: 2829 bp

OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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:	<ol style="list-style-type: none">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_001168296.1 , NP_001161768.1
RefSeq Size:	4563 bp
RefSeq ORF:	2832 bp
Locus ID:	270190
UniProt ID:	Q8CBF3
Cytogenetics:	9 F1
MW:	105.7 kDa

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]

Product images:


Circular map for MR226017