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# Product datasheet for MG211385

## Ephb1 (NM_173447) Mouse Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Ephb1 (NM_173447) Mouse Tagged ORF Clone |
| **Tag:** | TurboGFP |
| **Symbol:** | Ephb1 |
| **Synonyms:** | 9330129L11; AW488255; C130099E04Rik; Cek6; Elk; Elkh; ENSMUSG00000074119; Hek6; Net |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |



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**ORF Nucleotide Sequence:**

>MG211385 representing NM_173447
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCCTGGATTGCTTGCTGCTCTTCCTCCTGGCATCTGCAGTGGCCGCGATGGAAGAGACATTGATGG
ACACAAGGACAGCCACTGCAGAGTTGGGATGGACGGCCAACCCTGCCTCTGGGTGGGAAGAAGTCAGTGG
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GGGACTGCAGCAGCCTTCCAAATGTCCCAGGCTCCTGCAAGGAGACCTTCAACTTGTACTACTATGAGAC
TGACTCTGTGATTGCCACCAAGAAGTCAGCCTTCTGGTCTGAAGCCCCCTACCTCAAAGTGGACACCATT
GCTGCAGATGAGAGCTTCTCCCAGGTGGATTTTGGGGGAAGGTTGATGAAAGTCAACACGGAAGTCAGGA
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TTCTGTCCGTGTCTTCTTCAAAAAGTGTCCCAGCATCGTGCAGAATTTTGCAGTGTTCCCAGAAACCATG
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GTGCCACCATGAGGAGCATCACCTTGTCATGGCCTCAGCCGGAGCAACCCAATGGCATAATCCTGGACTA
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CCGCAGGCTTCACCTCCCTTCAGCTGGTCACCCAGATGACATCAGAAGACCTCCTGAGAATAGGGGTAAC
CTTGGCAGGCCATCAGAAGAAGATTCTGAGTAGCATTCACTCAATGAGGGTCCAGATGAACCAGTCACCA
TCGGTAATGGCG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG211385 representing NM_173447
Red=Cloning site Green=Tags(s)

MALDCLLLFLLASAVAAMEETLMDTRTATAELGWTANPASGWEEVSGYDENLNTIRTYQVCNVFEPNQNN
WLLTTFINRRGAHRIYTEMRFTVRDCSSLPNVPGSCKETFNLYYYETDSVIATKKSAFWSEAPYLKVDTI
AADESFSQVDFGGRLMKVNTEVRSFGPLTRNGFYLAFQDYGACMSLLSVRVFFKKCPSIVQNFAVFPETM
TGAESTSLVIARGTCIPNAEEVDVPIKLYCNGDGEWMVPIGRCTCKPGYEPENSVACKACPAGTFKASQE
AEGCSHCPSNSRSPSEASPICTCRTGYYRADFDPPEVACTSVPSGPRNVISIVNETSIILEWHPPRETGG
RDDVTYNIICKKCRADRRSCSRCDDNVEFVPRQLGLTECRVSISSLWAHTPYTFDIQAINGVSSKSPFPP
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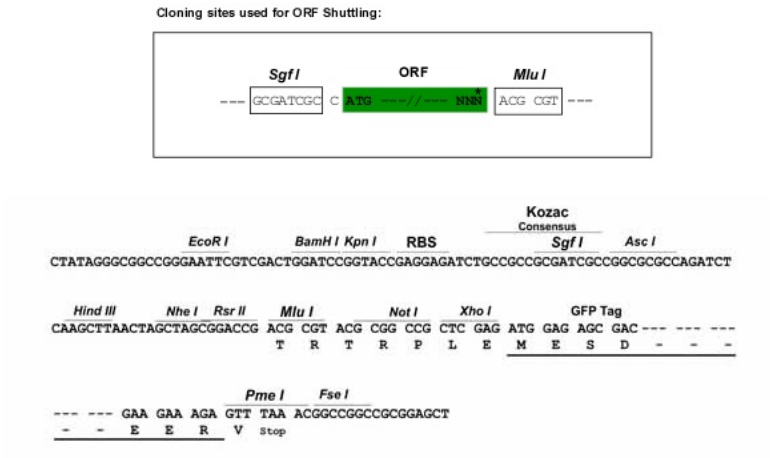
ARIDGLRPGMVYVVQVRARTVAGYGKFSGKMCFQTLTDDDYKSELREQLPLIAGSAAAGVVFVVSLVAIS
IVCSRKRAYSKEAAYSDKLQHYSTGRGSPGMKIYIDPFTYEDPNEAVREFAKEIDVSFVKIEEVIGAGEF
GEVYKGRLKLPGKREIYVAIKTLKAGYSEKQRRDFLSEASIMGQFDHPNIIRLEGVVTKSRPVMIITEFM
ENGALDSFLRQNDGQFTVIQLVGMLRGIAAGMKYLSEMNYVHRDLAARNILVNSNLVCKVSDFGLSRYLQ
DDTSDPTYTSSLGGKIPVRWTAPEAIAYRKFTSASDVWSYGIVMWEVMSFGERPYWDMSNQDVINAIEQD
YRLPPPMDCPAALHQLMLDCWQKDRNSRPRFAEIVNTLDKMIRNPASLKTVATITAVPSQPLLDRSIPDF
TAFTTVDDWLSAIKMVQYRDSFLTAGFTSLQLVTQMTSEDLLRIGVTLAGHQKKILSSIHSMRVQMNQSP
SVMA

TRTRPLE – GFP Tag – V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

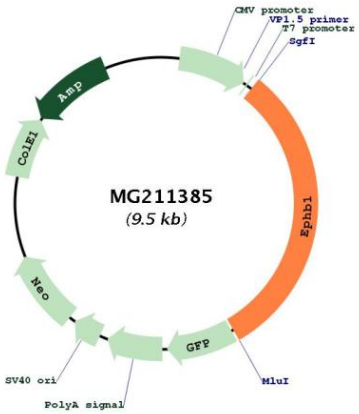



**ACCN:** NM_173447

**ORF Size:** 2952 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:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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] |

## Product images:




Circular map for MG211385