

## Product datasheet for MR225676

### Ephb2 (NM\_010142) Mouse Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Ephb2 (NM_010142) Mouse Tagged ORF Clone  |
| Tag:                      | Myc-DDK   |
| Symbol:                   | Ephb2   |
| Synonyms:                 | Cek5; Dr; Drt; Er; Erk; ETECK; Hek5; Nu; Nuk; Prk; Prkm5; Qek5; Sek; Sek3; Tyr; Tyro5 |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >MR225676 representing NM_010142<br>Red=Cloning site Blue=ORF Green=Tags(s)           |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGCCGTGCGCAGGCTGGGGCCGCGCTGCTGCTGCTGCCGCTGCTAGCCGCCGTGGAAGAAACCCTGA  
TGGACTCTACGACAGCAACGGCTGAGCTGGGCTGGATGGTACATCCCCATCAGGGTGGGAAGAGGTGAG  
CGGCTACGACGAGAACATGAACACTATCCGTACCTACCAGGTGTGCAATGTCTTTGAGTCAAGCCAGAAC  
AACTGGCTGCGGACCAAATTCATCCGGCGCCGCGGCCACCGCATCCACGTGGAGATGAAGTTCTCGG  
TGGCTGACTGCAGCAGCATTCCAGCGTCCGGGCTCCTGCAAGGAGACCTTCAACCTCTACTACTATGA  
GGCTGATTTTACTTAGCCACCAAAACCTTCCCAACTGGATGGAGAATCCGTGGGTGAAGTGGACACC  
ATCGCGGCCGATGAGAGCTTCTCTCAGGTGGACCTGGGTGGCCGCGTCATGAAAATCAACTGAGGTGC  
GAAGCTTCGGTCCCGTGTCCCGCAATGGTTTCTACCTGGCCTTCCAGGACTATGGCGGCTGTATGCCCT  
CATTGCTGTGCGCGTCTTCTACCGGAAGTGCCCCGAATCATCCAGAATGGTGCCATCTTCCAGGAGACA  
CTGTGGGGGCTGAGAGCACTTCGCTGGTGGCAGCTCGGGCAGCTGCATCGCCAATGCTGAAGAAGTGG  
ATGTGCCCATCAAACCTACTGTAAACGGGGACGGCAATGGTGGTGCCCATAGGTGCGTGCATGTGCAA  
GGCGGGCTCGAGGCTGTGGAGAACGGCACCGTCTGCCGAGGTTGTCCATCAGGAACCTTCAAGGCCAAC  
CAAGGGGACGAAGCCTGCACCACTGTCCCATCAACAGCCGACCACTCCGAGGTGCCACCAACTGTG  
TATGCCGCAACGGCTACTACAGGGCCGACCTGGACCCCTTAGACATGCCTTGACAAACCATCCCCTCTGC  
GCCCCAGGCTGTGATCTCCAGCGTCAACGAGACGTCCCTCATGCTAGAGTGGACCCACCCCGAGACTCG  
GGGGTTCGCGAGGATCTTGTTTACAACATCATCTGCAAGAGCTGTGGCTCCGGCCGGGGCGCATGCACGC  
GCTGCGGGGACAACGTGCAGTACGCGCCCCGACGCTGGGCTGACTGAGCCGCGCATCTACATCAGTGA  
CCTGCTGGCACACGCGAGTACACCTTCGAGATCCAGGCCGTGAACGGTGTGACTGACCAGAGTCCCTTC  
TCACCTCAGTTCGCTCTGTGAACATCACCAACCAAGCAGCACCATCGGCCGTGCCATCATGCACC  
AGGTGAGCCGCACTGTGGACAGCATCACCTGTCTGGTCCCAGCCAGACCAGCCCAACGGTGTGATCCT  
GGACTACGAGCTGCAGTACTATGAGAAGGAGCTCAGTGAGTACAACGCCACGGCCATAAAAAGCCCCACC



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AACACAGTCACTGTGCAGGGCCTCAAAGCCGGCGCCATCTATGTCTTCCAGGTGCGGGCAGCACCAGTTC  
 CAGGCTATGGGCGCTACAGTGGCAAGATGTACTTCAAACCATGACAGAAGCCGAGTACCAGACCAGCAT  
 CAAGGAAAAGCTACCCCTCATCGTTGGCTCCTCCGCCCGGGCTTAGTCTTCCATCGCTGTGGTCGTC  
 ATTGCCATCGTATGTAACAGACGGGGTTTGGAGCGTCCGACTCAGAGTACACGGACAAGCTACAACACT  
 ACACCAGCGGACACATGACCCAGGCATGAAGATCTATATAGACCCTTTCACCTATGAAGATCCTAATGA  
 GGCATTGCGGGAGTTTGC AAGGAAATGACATCTCTGTGTCAAGATTGAGCAGGTGATCGGAGCAGGG  
 GAATTTGGTGAGGTCTGCAGTGGCCATTTGAAGCTGCCAGGCAAGAGAGAGATCTTTGTAGCCATCAAGA  
 CCCTCAAGTCAGGATACACGGAGAAACAGCGCCGGACTTCTGAGTGAGGCATCCATCATGGGCCAGTT  
 CGACCACCCCAATGTCATCCATCTGGAAGGGTTGTACCAAGAGCACACCTGTCATGATCATCACTGAA  
 TTCATGGAGAACGGATCTCTGGACTCCTTCCCGCAAACGATGGGCAGTTCACAGTCACTCAACTGG  
 TGGGCATGCTGAGGGGATTGACGCCGGCATGAAGTACCTGGCGGACATGAACTACGTGCACCGTACCT  
 TGCTGCTCGAAACATCCTCGTCAACAGCAACCTGGTGTGAAGGTGTCTGATTTTGGGCTCTCACGCTC  
 CTGGAGGATGACACGTCTGACCCACCTATACCAGCGCTCTGGGTGGGAAGATCCCCATCCGTTGGACGG  
 CACCGGAAGCCATCCAGTACCGGAAATTCACCTCGGCCAGTGATGTGTGGAGCTATGGCATCGTCATGTG  
 GGAGGTGATGCTCCTACGGGGAACGACCCTACTGGGACATGACCAATCAAGACGTAATCAAGCCATTGAA  
 CAGGACTACAGACTACCTCCGCCATGGACTGCCCTAGTCCCTGCACCAGCTCATGCTGGACTGCTGGC  
 AGAAGGACCGCAACCACCGGCCAAGTTCGGCCAGATTGTCAACACGCTGGACAAGATGATCCGAAACCC  
 CAACAGCCTCAAAGCCATGGCACCCTGTCTCTGGCATCAACCTGCCACTGCTGGACCGCACGATACCG  
 GACTACACCAGCTTAAACACGGTGGATGAGTGGCTAGAGGCCATCAAGATGGGCCAGTACAAGGAGAGCT  
 TTGCCAACGCCGGCTTACCTCTTTCGACGTTGTATCTCAGATGATGATGGAGGACATTCCTCGGTTGG  
 GGTCACCTAGCTGGCCACCAGAAAAAATCCTGAACAGTATCCAGGTGATGCGGGCCAGATGAACCAG  
 ATCCAGTCTGTAGAGTT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGAT AAGTTTAA

**Protein Sequence:**

>MR225676 representing NM\_010142  
 Red=Cloning site Green=Tags(s)

MAVRRLLGAALLLLPLLA VEETLMDSTTATAELGWMVHPPSGWEEVSGYDENMNTIRTYQVCNVFESSQN  
 NWLRTKFI RRRGAHRIHVEMKFSVRDCSSIPSPVGSCKETFNLYYYEADFDLATKTFPNWMENPWVKVDT  
 IAADESFQVDLGGVRMKINTEVRSFGPVS RNIFYLAFQDYGGCMLIAVRV FYRKPRIIQNGAIFQET  
 LSGAESTSLVAARGSCIANAEVDVPIKLYCNGDGEWL VPIGRMCKAGFEAVENGTVCRCGCPSTGFKAN  
 QGDEACTHCPINSRTTSEGATNCVCRNGYYRADLDPLDMPCTTIPSAPQAVISSVNETSLMLEWTPPRDS  
 GREDLVYNIICKSCGSGRGACTRCGDNVQYAPRQLGLTEPRIYISDLLAHTQYTFEIQAVNGVTDQSPF  
 SPQFASVNITTNQAAPS AVSIMHQVSRTVDSITLSWSQPDQPNGVILDYELQYYEKELSEYNATAIKSPT  
 NTVTVQGLKAGAIYVFQVRARTVAGYGRYS GMYFQTMTEAEYQTSIKEKLP LIGSSAAGLVFLIAVVV  
 IAIVCNR RGFERADSEYTDKLQHYTSGHMTPGMKIYIDPF TYEDPNEAVREFAKEIDISCVKIEQVIGAG  
 EFGVEVCSGHLKLP GKREIFVAIKTLKSGYTEKQRRDFLSEASIMGQFDHPNVIHLEGVVTKSTPVMITE  
 FMENGLSDFLRQNDGQFTVIQLVGMLRGIAAGMKYLADMNYVHRDLAARNILVNSNLVCKVSDFLSRF  
 LEDDTS DPTYTSALGGKIPIRWTAPEAIQYRKFTSASDVWSYGI VMWEVMSYGERPYWDMNQDVINAIE  
 QDYRLPPPMDCP SALHQLMLDCWQKDRNHRPKFGQIVNTLDK MIRNPNSLKAMAPLSSGINLPLLDRTIP  
 DYTSFNTVDEWLEAIKMGQYKESFANAGFTSFDVVSQMMMEDILRVGVTLAGHQKKILNSIQVMRAQMNQ  
 IQSVEV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mm9009\\_c08.zip](https://cdn.origene.com/chromatograms/mm9009_c08.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_010142

**ORF Size:** 2958 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.
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\\_010142.4](#), [NP\\_034272.1](#)

**RefSeq Size:** 4780 bp

**RefSeq ORF:** 2961 bp

**Locus ID:** 13844

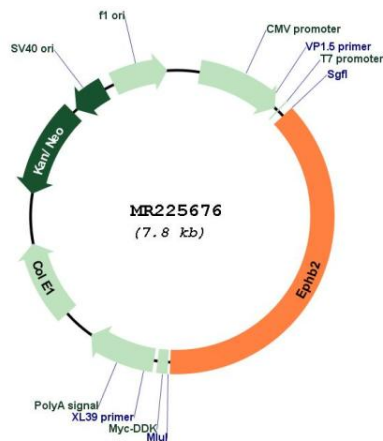
**UniProt ID:** [P54763](#)

**Cytogenetics:** 4 69.0 cM

**MW:** 110.3 kDa

**Gene Summary:** This gene encodes a member of the Eph receptor family of receptor tyrosine kinase transmembrane glycoproteins. These receptors consist of an N-terminal glycosylated ligand-binding domain, a transmembrane region and an intracellular kinase domain. The encoded receptor preferentially binds membrane-bound ephrin-B ligands and is involved in nervous system and vascular development. This gene is used as a marker of intestinal stem cells. Homozygous knockout mice for this gene exhibit impaired axon guidance and vestibular function. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015]

### Product images:



Circular map for MR225676