

## Product datasheet for RC214301

### Eph receptor B1 (EPHB1) (NM\_004441) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Eph receptor B1 (EPHB1) (NM_004441) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Eph receptor B1
Synonyms:	ELK; EPHT2; Hek6; NET
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214301 representing NM_004441 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGCCCTGGATTATCTACTACTGCTCCTCCTGGCATCCGCAGTGGCTGCGATGGAAGAAACGTTAATGG  
ACACCAGAACGGCTACTGCAGAGCTGGGCTGGACGGCCAATCCTGCGTCCGGGTGGGAAGAAGTCAGTGG  
CTACGATGAAAACCTGAACACCATCCGCACCTACCAGGTGTGCAATGTCTTCGAGCCCAACCAGAACAAT  
TGGCTGCTCACCACCTTCATCAACCGCGGGGGGCCCATCGCATCTACACAGAGATGCGCTTCACGTGA  
GAGACTGCAGCAGCCTCCCTAATGTCCCAGGATCTGCAAGGAGACCTTCAACTTGTATTACTATGAGAC  
TGACTCTGTATTGCCACCAAGAAGTCAGCCTTCTGGTCTGAGGCCCCCTACCTCAAAGTAGACACCATT  
GCTGCAGATGAGAGCTTCTCCCAGTGGACTTTGGGGGAAGGCTGATGAAGGTAAACACAGAAGTCAGGA  
GCTTTGGGCCTTACTCGGAATGGTTTTTACCTCGCTTTTCAGGATTATGGAGCCTGTATGTCTTCTT  
TTCTGTCCGTGTCTTCTCAAAAAGTGTCCCAGCATTGTGCAAAAATTTGCAGTGTTCAGAGACTATG  
ACAGGGGCAGAGACACATCTCTGGTGATTGCTCGGGGCACATGCATCCCCAACGCAGAGGAAGTGGACG  
TGCCCATCAAACCTACTGCAACGGGGATGGGGAAATGGATGGTGCCTATTGGCGATGCACCTGCAAGCC  
TGGCTATGAGCCTGAGAACAGCGTGGCATGCAAGGCTTGCCTGCAGGGACATTCAGGCCAGCCAGGAA  
GCTGAAGGCTGCTCCCCTGCCCCTCAACAGCCGCTCCCCTGCAGAGGCGTCTCCCATCTGCACCTGTC  
GGACCGTTATTACCGAGCGGACTTTGACCCTCCAGAAGTGGCATGCACTAGCGTCCCATCAGGTCCCCG  
CAATGTTATCTCCATCGTCAATGAGACGTCATATTCTGGAGTGGCACCCCTCAAGGGAGACAGGTGGG  
CGGGATGATGTGACCTACAACATCATCTGCAAAAAGTGCCGGCAGACCGCCGGAGCTGCTCCCCTGTG  
ACGACAAATGTGGAGTTTGTGCCAGGCAGCTGGGCCTGACGGAGTGCCGCTCTCCATCAGCAGCCTGTG  
GGCCACACCCCTACACCTTTGACATCCAGGCCATCAATGGAGTCTCCAGCAAGAGTCCCTTCCCCCA  
CAGCAGTCTCTGCAACATCACCACAAACCAAGCCGCCCTCCACCGTTCATCATGCACCAAGTCA  
GTGCCACTATGAGGAGCATCACCTTGTGATGGCCACAGCCGAGCAGCCCAATGGCATCATCTGGACTA  
TGAGATCCGGTACTATGAGAAGGAACACAATGAGTTCAACTCCTCCATGGCCAGGAGTCAGACCAACACA



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GCAAGGATTGATGGGCTGCGGCCTGGCATGGTATATGTGGTACAGGTGCGTGCCCGCACTGTTGCTGGCT  
 ACGGCAAGTTCAGTGGCAAGATGTCTCCAGACTCTGACTGACGATGATTACAAGTCAGAGCTGAGGGA  
 GCAGCTGCCCCGATTGCTGGCTCGGCAGCGCCGGGGTCGTGTTGTTGTCCTTGGTGGCCATCTCT  
 ATCGTCTGTAGCAGAAACGGGCTTATAGCAAAGAGGCTGTGTACAGCGATAAGCTCCAGCATTACAGCA  
 CAGGCCGAGGCTCCCCAGGATGAAGATCTACATTGACCCCTTCACTTATGAGGATCCCAACGAAGCTGT  
 CCGGGAGTTTGCCAAGGAGATTGATGTATCTTTTGTGAAAATTGAAGAGGTCATCGGAGCAGGGGAGTTT  
 GGAGAAGTGTACAAGGGCGTTTAAAAGTGCAGGCAAGAGGAAATCTACGTGGCCATCAAGACCCTGA  
 AGGCAGGTAAGTACTCGGAGAAGCAGCGTCGGGACTTTCTGAGTGAGGCGAGCATCATGGGCCAGTTCGACCA  
 TCTAACATCATTGCGCTGGAGGTTGGTTCACCAAGAGTCGGCCTGTCATGATCATCACAGAGTTCATG  
 GAGAATGGTGCATTGGATTCTTTCTCAGGCAAAATGACGGGCAGTTCACCGTATCCAGCTTGTGGGTA  
 TGCTCAGGGGCATCGCTGCTGGCATGAAGTACCTGGCTGAGATGAATTATGTGCATCGGGACCTGGCTGC  
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 GATGACACCTCAGATCCCACCTACACCAGCTCCTGGGAGGGAAGATCCCTGTGAGATGGACAGCTCCAG  
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 TACCGGCTGCCCCACCCATGGACTGTCCAGCTGCTCTACACCAGCTCATGCTGGACTGTTGGCAGAAGG  
 ACCGGAACAGCCGGCCCCGGTTTGCAGGATTGTCAACACCCTAGATAAGATGATCCGGAACCCGGCAAG  
 TCTCAAGACTGTGGCAACCATCACCGCCGTGCCTTCCCAGCCCCTGCTCGACCGCTCCATCCCAGACTTC  
 ACGGCCTTTACCACCGTGGATGACTGGCTCAGCGCCATCAAAATGGTCCAGTACAGGGACAGCTTCTCTCA  
 CTGCTGGCTTACCTCCCTCCAGCTGGTCAACCAGATGACATCAGAAGACCTCCTGAGAATAGGCATCAC  
 CTTGGCAGGCCATCAGAAGAAGTCTGAACAGCATTATTCTATGAGGGTCCAGATAAGTCAGTACCA  
 ACGGCAATGGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGAT AAGTTTAA

**Protein Sequence:**

>RC214301 representing NM\_004441  
 Red=Cloning site Green=Tags(s)

MALDYLLLLLLASAVAAMEETLMDTRTATAELGWTANPASGWEEVSGYDENLNTIRTYQVCNVFEPNQNN  
 WLLTTFINRRGAHRIYTEMRFYVRDCSSLPNVPGSCKETFNLYYYETDSVIATKKSFAFWSEAPYLKVDTI  
 AADESFSQVDFGRLMKVNTEVRSFGPLTRNGFYLAQDYGACMSLLSVRVFFKKCPSIVQNFVAVFPEM  
 TGAESTSLVIARGTCIPNAEEVDVPIKLYCNGDGEWMPVIGRCTCKPGYEPENSVACKACAPAGTFKASQE  
 AEGCSHCPSNSRPAEASPICTCRTGYRADFDPEVACTSVPSGPRNVISIVNETSIIIEWHPPRETGG  
 RDDVTYNIICKKCRADRRSCSRCDNVEFVPRQLGLTECRVSISSLWAHTPYTFDIQAINGVSSKSPFPP  
 QHVSVNIITNQAAPSTVPIMHQVSATMRSITLSWPQPEQPNGIILDYIEIRYYEKEHNEFNSSMARSQTNT  
 ARIDGLRPGMVVYVQVRARTVAGYGKFSGKMFQTLDDDYKSELREQLPLIAGSAAAGVVFVSLVAIS  
 IVCSRKRAYSKEAVYSDKLQHYSTGRGSPGMKIYIDPFTYEDPNEAVREFAKEIDVSFVKIEEVIGAGEF  
 GEVYKGRLLKLPKREIYYAIKTLKAGYSEKQRDFLSEASIMGQFDHPNIIIRLEGVVTKSRPVMIIITEFM  
 ENGALDSFLRQNDGQFTVIQLVGMLRGI AAGMKYLAEMNYVHRDLAARNILLNSNLVCKVSDVDFLSRYLQ  
 DDTSDPTYTSSLGGKIPVRWTAPEAIAIRKFTSASDVWSYGIWMWEVMSFGERPYWDMNQDVINAIEQD  
 YRLPPPMDCPAALHQLMLDCWQKDRNSRPRFAEIVNTLDKMRNPASLKTVAITITAVPSQLLDRSIPDF  
 TAFTTVDDWLSAIKMQYRDSFLTAGFTSLQLVTQMTSEDLRIGITLAGHQKILNSIHSRMRVQISQSP  
 TAMA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg3664\\_c05.zip](https://cdn.origene.com/chromatograms/mg3664_c05.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_004441

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.
  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\\_004441.5](#)

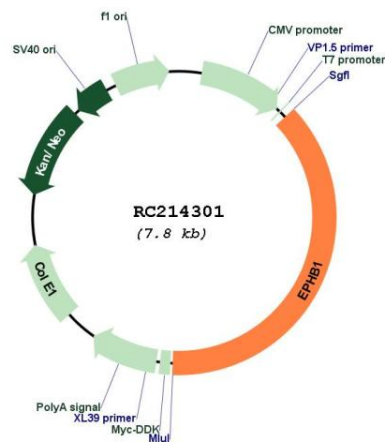
RefSeq Size: 4536 bp

RefSeq ORF: 2955 bp

Locus ID:	2047
UniProt ID:	<a href="#">P54762</a>
Cytogenetics:	3q22.2
Domains:	kinase, EPH_lbd, TyrKc, SAM, S_TKc, FN3
Protein Families:	Druggable Genome, Protein Kinase, Transmembrane
Protein Pathways:	Axon guidance
MW:	109.9 kDa

**Gene Summary:** Ephrin receptors and their ligands, the ephrins, mediate numerous developmental processes, particularly in the nervous system. Based on their structures and sequence relationships, ephrins are divided into the ephrin-A (EFNA) class, which are anchored to the membrane by a glycosylphosphatidylinositol linkage, and the ephrin-B (EFNB) class, which are transmembrane proteins. The Eph family of receptors are divided into 2 groups based on the similarity of their extracellular domain sequences and their affinities for binding ephrin-A and ephrin-B ligands. Ephrin receptors make up the largest subgroup of the receptor tyrosine kinase (RTK) family. The protein encoded by this gene is a receptor for ephrin-B family members. [provided by RefSeq, Jul 2008]

## Product images:



Circular map for RC214301