

Product datasheet for **SC109198**

Eph receptor B2 (EPHB2) (NM_017449) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Eph receptor B2 (EPHB2) (NM_017449) Human Untagged Clone
Tag: Tag Free
Symbol: Eph receptor B2
Synonyms: BDPLT22; CAPB; DRT; EK5; EPHT3; ERK; Hek5; PCBC; Tyro5
Mammalian Cell Selection: None
Vector: pCMV6-XL4
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_017449 edited
 ATGGCTCTGCGGAGGCTGGGGCCGCGCTGCTGCTGCTGCGCGCTGCTCGCCCGCTGGAA
 GAAACGCTAATGGACTCCACTACAGCGACTGCTGAGCTGGGCTGGATGGTGCATCCTCCA
 TCAGGGTGGGAAGAGGTGAGTGGCTACGATGAGAACATGAACACGATCCGCACGTACCAG
 GTGTGCAACGTGTTTGTGCAAGCCAGAACAAGTGGCTACGGACCAAGTTTATCCGGCGC
 CGTGGCGCCACCGCATCCACGTGGAGATGAAGTTTTCGGTGCGTGACTGCAGCAGCATC
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 GCGCCATCTATGTCTTCCAGGTGCGGGCACGCACCGTGGCAGGCTACGGCGCTACAGC



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GGCAAGATGTA CTTCAGACCATGACAGAAGCCGAGTACCAGACAAGCATCCAGGAGAAG
TTGCCACTCATCATCGGCTCCTCGGCCGCTGGCCTGGTCTTCTCATTGCTGTGGTTGTC
ATCGCCATCGTGTGTAACAGACGGGGTTTGAGCGTGCTGACTCGGAGTACACGGACAAG
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GGTCATAGCTGTTTCTGAACAGATCCCGGTGGCATCCCTGTGACCCCTCCCA

5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_017449 unedited
CGCCTTGCCGCCCCCTGGCCCCGAGCCCGGGGCGCGCTCCCGCCGGGCGCTCC
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GGGGCCGCGCTGCTGCTGCTGCCGCTGCTCGCCGCGTGAAGAAACGCTAATGGACTC
CACTACAGCGACTGCTGAGCTGGGCTGGATGGTGCATCCTCCATCAGGGTGGGAAGAGGT
GAGTGGCTACGATGAGAACATGAACACGATCCGCACGTACCAGGTGTGCAACGTGTTGA
GTCAAGCCAGAACAACCTGGCTACGGACCAAGTTTATCCGGCGCCGTGGCGCCACCAGCAT
CCACGTGGAGATGAAGTTTTCGGTGCGTGACTGCAGCAGCATCCCAGCGTGCCTGGCTC
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CTTCCCCAACTGGATGGAGAATCCATGGGTGAAGGTGGATACCATTGCAGCCGACGAGAG
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ATCTTNCAGAAACCCCTGGCGGGGGCTGAGACACATNGCTTGGTGGCTGCCCGGGCAA
CTGCATCGCCATGCGGAAGAGAGAGGGGAGTACCCTCAAGCTCTACTGTACCGGGGACC
GCCAAGGGGCTG
```

3' Read Nucleotide Sequence:

```
>OriGene 3' read for NM_017449 unedited
TAAGGAACCGCGCCGAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTAAATGTCAA
AGTGTCATTTATTGTCAATTAACAAAAACCAAAACAAAAACAACCCACAAACAAACCC
CCTAAACCAAAACCAACCTGTGACCAAAATACCCCGAGTCCAGGAATTGCTGTAACAA
ACCCAGATGCAGGATCAACCTTCTCAGCGGCAGTCGGAGCTGACGGCAGTCACTGCAGT
ATCAGTCTCGAGGCAGGGGCTGGCGGGAGTGGGCACCAGGAGGGCCAGGCTGCCAGGCT
GTGCGCGTGATATGTACCTGGAGCTGCAGACCTGGGGGTGCCCATCCTCAGGAAGGCTG
ACCTTTCTGGGGTCCCCGCGTTCTCCCTGACCCAGGAGGACAAAAGCCCTTTCAGCCCT
GTGAGCCAACAGGAGAAACAGTGTCTTTTATTGGAGTTTCTAAATACTCTCAAAGACA
GAAAAATTCTTCTGTTTGCCAGTGGTGGCAGGAATAGATTTTCCAGAGGGGTTCTCAG
GGTGGCTGTCTGTCCATCTGTCCCGTCTCCAGCGCTTGGTTGTTGAGTGAGGCCTANA
GGAGCAGCAGGGACAGGAGCCAAGGGCGGCCCTGTCTCTCCCTTACATTTGTTTTTC
TGAAAGTGTCTTGGCTCTGGCCAGGTCACCTTCCAGAGGGAGTTGGAGAGAACTGC
TTTTGTCTCCGATTGGACACATCGCATGAATCTCCAAGCCCTTTTTATCCCCCGCAG
AACAGTCATTGCTTCCCTAATGAAATCCTCTTAAAAAATTCCTTGTATTTCCCGCC
CCTCCAGAAATCTGTTTCTTTTTCCATTCCCTTTTTTTTTCCGTCGTTTGGAAATGC
ATGTTATCTTGGGACTTCTCGGGCTGCACCGCTTTTTCTCCCTGGCCAGGCCCTCCG
CGATGGCGGGCCCCGCTGAAAAAC
```

Restriction Sites:

NotI-NotI

ACCN:

NM_017449

Insert Size:

4000 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 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](#)

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_017449.2](#), [NP_059145.1](#)

RefSeq Size: 4866 bp

RefSeq ORF: 3168 bp

Locus ID: 2048

UniProt ID: [P29323](#)

Cytogenetics: 1p36.12

Domains: pkinase, EPH_lbd, TyrKc, SAM, S_TKc, FN3

Protein Families: Druggable Genome, Protein Kinase, Transmembrane

Protein Pathways: Axon guidance

Gene Summary:

This gene encodes a member of the Eph receptor family of receptor tyrosine kinase transmembrane glycoproteins. These receptors are composed of an N-terminal glycosylated ligand-binding domain, a transmembrane region and an intracellular kinase domain. They bind ligands called ephrins and are involved in diverse cellular processes including motility, division, and differentiation. A distinguishing characteristic of Eph-ephrin signaling is that both receptors and ligands are competent to transduce a signaling cascade, resulting in bidirectional signaling. This protein belongs to a subgroup of the Eph receptors called EphB. Proteins of this subgroup are distinguished from other members of the family by sequence homology and preferential binding affinity for membrane-bound ephrin-B ligands. Allelic variants are associated with prostate and brain cancer susceptibility. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2015]

Transcript Variant: This variant (1) uses an alternate in-frame splice site compared to variant 2. It encodes isoform 1, which is shorter than isoform 2. **Sequence Note:** This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments. **CCDS Note:** The coding region has been updated to represent an alternative 3' splice pattern, resulting in a shorter and distinct C-terminus that is better supported by available transcript and homology data.