

Product datasheet for **MC220715**

Epha4 (BC004782) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Epha4 (BC004782) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Epha4
Synonyms:	Sek1, Cek8, Hek8, Tyro1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-Myc-DDK (PS100007)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

Fully Sequenced ORF: >BC004782
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGATGAGAAAAATACACCGATCCGAACCTACCAGGTGTGCAACGTGATGGAAGCCAGCCAGAACAAC
 GGCTGCGAACTGACTGGATCACCCGCGAAGGGCGCAGAGGGTGTACATTGAAATTAAGTCACTCTAAG
 GGACTGCAACAGTCTCCGGCGTCATGGGACTTGCAAGGAGACGTTTAACTCTACTATTATGAGTCG
 GACAACGACAAGGAGCGCTTCATCAGAGAGAGCCAGTTTGGCAAGATCGACACCATCGCAGCTGATGAGA
 GCTTCACGCAGGTGGACATTGGTGACCGAATCATGAACTCAACACTGAGATCCGGGATGTAGGGCCACT
 GAGCAAGAAAGGGTTTTACCTGGCTTTTCAGGATGTGGGTGCTTGCATCGCCCTGGTGTCTGTCCGTGTG
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 CCTCTCCCTGGTGAAGTTCGAGGCTCCTGTGTCAACAACCTCAGAAGAGAAGGATGTGCCAAAAATGTA
 CTGTGGGGCAGATGGTGAATGGCTGGTACCCATTGGCAACTGCCTATGCAACGCTGGGCACGAGGAGCAG
 AATGGTGAATGCCAAGCTTGCAAAATGGATATTACAAAGCTCTTCCACGGATGCCTCCTGTGCCAAGT
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 TGACAACGATGCAGCCTCCATGCCTGCACCCGCCACCATCTGCTCCCTCAACTTGATTTCTAATGTC
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 CACACCACAGCAGAACGGACTCAAGACGACCAGAGTCTCCATCACTGACCTCCTAGCACACCAATTAC
 ACGTTTGAGATCTGGGCAGTGAATGAAGTGTCTAAGTATAACCTAGCCCGGACCAGTCCGTGTCTGTCA
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 CGTAGCTCTGGCTTGGCTGGAACCAAGATCGACCAAAATGGAGTCATCTTAGAATATGAAGTCAAATATTAT
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 CTGGTCTCTGTCTCTGGCAGTGTGGTCTCGTGGTCATTCTCATTGCAGCTTTTGTGATCAGCCGAAGAC
 GGAGTAAGTACAGCAAAGCGAAACAAGAAGCAGATGAAGAGAAACATTTGAATCAAGGTGTTAGAATTA
 TGTGGATCCCTTTACATACGAAGACCCCAACCAGGCAGTTCGAGAATTTGCCAAAGAAATCGATGCATCC
 TGCATTAATGAAAAGGTCATAGGAGTTGGTGAATTTGGAGAGGTCTGCAGTGGGCGTCTCAAAGTGC
 CCGGCAAGAGAGAGATCTGTGTGCCATCAAGACTCTGAAAGCTGGCTATACTGACAAGCAGAGGAGAGA
 CTTCTGAGTGAGGCCAGCATCATGGGACAGTTTGACCACCCAAACATAATCCACCTGGAAGGCGTTGTC
 ACCAAATGTAACCGGTAATGATCATAACGGAGTACATGGAGAACGGCTCCTTGGATGCTTTCTCAGGA
 AGAATGATGGCCGCTTTACAGTCATTGAGCTGGTGGGCATGCTCCGGGCGATTGGCTCGGGGATGAAGTA
 CTTATCTGATATGAGCTATGTGCATCGAGACCTGGCTGCCAGGAACATCCTGGTAAACAGCAACTGGTC
 TGCAAGGTGTCTGACTTTGGCATGTCCAGGGTGTGGAGGATGACCCCGAAGCAGCCTACACTACCAGGG
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 TGTCTGGAGCTACGGAATCGTTATGTGGGAAGTGTATGTCATATGGAGAGAGACCGTACTGGGATATGTCC
 AATCAAGATGTGATCAAAGCCATCGAGGAAGGGTACCGGCTACCCCTCCAATGGACTGCCCATTTGCC
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 ACAGCCTTGTAGATCCCAGCTCCCTGAATTTCTGCTGTAGTATCAGTGGGCGACTGGCTGCAGGCCA
 TCAAAATGGACCGGTATAAGGACAACCTCACGGCCCGGGTACACGACACTAGAAGCCGTGGTTACAT
 GAGCCAGGACGACCTGGCGAGAATTGGCATCACCGCCATCACGCACCAGAATAAGATTTGAGCAGCGTC
 CAGGCGATGCCAACCCAGATGCAGCAGATGCATGGCAGGATGGTTCCTGTCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: BC004782

Insert Size: 2784 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: [BC004782](#), [AAH04782](#)

RefSeq Size: 3544 bp

RefSeq ORF: 2783 bp

Locus ID: 13838

Cytogenetics: 1 39.55 cM

Gene Summary:

Receptor tyrosine kinase which binds membrane-bound ephrin 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. Highly promiscuous, it has the unique property among Eph receptors to bind and to be physiologically activated by both GPI-anchored ephrin-A and transmembrane ephrin-B ligands including EFNA1 and EFNB3. Upon activation by ephrin ligands, modulates cell morphology and integrin-dependent cell adhesion through regulation of the Rac, Rap and Rho GTPases activity. Plays an important role in the development of the nervous system controlling different steps of axonal guidance including the establishment of the corticospinal projections. May also control the segregation of motor and sensory axons during neuromuscular circuit development. In addition to its role in axonal guidance plays a role in synaptic plasticity. Activated by EFNA1 phosphorylates CDK5 at 'Tyr-15' which in turn phosphorylates NGEF regulating RHOA and dendritic spine morphogenesis. In the nervous system, plays also a role in repair after injury preventing axonal regeneration and in angiogenesis playing a role in central nervous system vascular formation. Additionally, its promiscuity makes it available to participate in a variety of cell-cell signaling regulating for instance the development of the thymic epithelium.[UniProtKB/Swiss-Prot Function]