

Product datasheet for MR211389

Epha4 (NM_007936) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Epha4 (NM_007936) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Epha4
Synonyms:	2900005C20Rik; AI385584; Cek8; Hek8; rb; Sek; Sek1; Tyro1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211389 representing NM_007936 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGGCTGGGATTTTCTATTTTCATCTCTTTTCGTTTCTTTTGAATTTGCGACGCTGTACCCGGTTCTA
GGGTATACCCCGGAATGAAGTTACTTTATTGGATTCCAGATCTGTTCCAGGAGAGCTTGGGTGGATAGC
AAGCCCTCTGGAAGGAGGGTGGGAGGAAGTGAAGCATTATGGATGAGAAAAATACCCGATCCGAACCTAC
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GTCCGGACAGCTGCCAGGAACACAGATATCAAAGGCTGAACCCTCTGACTTCCTATGTTTTTCACGTGC
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ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGAT AAGTTTAA

Protein Sequence:

>MR211389 representing NM_007936
 Red=Cloning site Green=Tags(s)

MAGIFYFILFSLFLGICDAVTGSRVYPANEVTL LLSRSVQGELGWIASPLEGGWEEVSIMDEKNTPIRTY
 QVCNVMEASQNNWLRDWTIREGAQRVYIEIKFTLRDCNSLPGVMGTCKETFNLYYYESDNKERFIRES
 QFGKIDTIAADESFTQVDIGDRIMKLNTEIRDVGPLSKKGFYLAQFDVGACIALVSVRVFYKCKPLTVRN
 LAQFPDITGADTSSLVEVRGSCVNNSEEKDVPKMYCGADGEWLVPIGNCLCNAGHEEQNGECQACKIGY
 YKALSTDASCAKCPPHSYSVWEGATSCTCDRGFFRADNDAASMPCTRPPSAPLNLISNVNETSVNLEWSS
 PQNTGGRQDISYNNVCKKCGAGDPSKCRPCGSGVHYTPQQNGLKTRVSI TDLLAHTNYTFEIVAVNGVS
 KYNPSPDQSVSVTVTTNQAAPSSIALVQAKEVTRYVALAWLEPDRPNGVILEYEVKYYEKDQNERSYRI
 VRTAARNTDIKGLNPLTSYVFHVRARTAAGYGDFSEPLEVTTNTVPSRIIGDGANSTVLLVSVSGSVVLV
 VILIAAFVISRRRSKYSKAKQEADEEKHLNQGVRTYVDPFTYEDPNQAVREFAKEIDASCIKIEKVIQV
 EFGVCSGRLKVPKREICVAIKTLKAGYTDKQRRDFLSEASIMGQFDHPNIIHLEGVVTCKPVMITE
 YMENGLDAFLRKNDRFTVIQLVGMLRGI GSGMKYLSDMYSVHRDLAARNILVNSNLVCKVSDFGMSRV
 LEDDPEAAYTTRGGKIPIRWTAPEAIAIRKFTSASDVWSYGI VMWEVMSYGERPYWMSNQDVIKAIIEG
 YRLPPMDCPIALHQLMLDCWQKERSDRPKFGQIVNMLDKLIRNPNLSLKRGTGSESSRPNTALLDPSSPEF
 SAVVSVGDWLQAIKMDRYKDNFTAAGYTTLEAVVHMSQDDLARIGITAITHQNKILSSVQAMRTQMOMH
 GRMVPV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_007936

ORF Size: 2958 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.

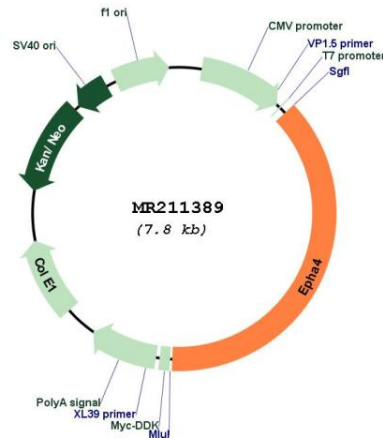
RefSeq: [NM_007936.2](#)

RefSeq Size: 6328 bp

RefSeq ORF: 2961 bp
 Locus ID: 13838
 UniProt ID: [Q03137](#)
 Cytogenetics: 1 39.55 cM
 MW: 110.3 kDa

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]

Product images:



Circular map for MR211389