

## Product datasheet for MR211406

### Epha7 (BC026153) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Epha7 (BC026153) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Epha7
Synonyms:	Ehk3, Mdk1, Cek11, Hek11
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR211406 representing BC026153 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGTTGTTCAAACCTCGGTTCCCTTCGTTGATTATTTTGTGTTACATCTGGCTGCTTGGCTTGCACACA  
CGGGGAGGCGCAGGCTCGAAGGAAGTACTATTACTGGACTCGAAAGCACAACAACAGAATTGGAATG  
GATTTCTCTCCACCCAGTGGTGGGAAGAAATTAGTGGTTTGGATGAGAACTACTCCGATAAGAACA  
TACCAGGTGTGCCAGGTCATGGAGCCCAACCAGAACAACTGGCTGCGGACTAACTGGATTTCTAAAGGCA  
ACGCACAAAGGATTTTTGTAGAATTGAAATTCACCTTGAGGGATTGTAATAGTCTTCCCGGAGTCCCTGGG  
AACTTGAAGGAAACGTTAATTTGACTATTATGAAACAGACTACGACACCCGGCAGGAATATACGAGAA  
AACCTTTATGTTAAAATAGACACCATTGCTGCAGATGAAAGTTTACACAAAGGTGACCTTGGTGAAGAA  
AGATGAAGCTGAACACTGAGGTGAGAGAGATTGGACCTTGTCCAAAAGGGATTCTATCTTGCCTTCA  
GGATGTAGGGGCTTGATAGCATTGGTTTCTGTCAAAGTACTACAAGAAGTGTGGTCCATTGTTGAG  
AACTTAGCTGTCTTCCAGATACAGTACTGGTTCGGAATTTTCGTCTTAGTCGAGGTCGTGGGACAT  
GTGTGAGCAGTGCCGAGGAAGAGGCGAGAAAATCCCCAGGATGCATTGCAGTGCAGAAGGAGATGGCT  
AGTACCCATTGGAAAATGCATCTGCAAAGCAGGCTATCAGCAAAAAGGGGACACTTGCAACCCTGTGGC  
CGCAGGTTCTACAAATCTTCTCAGGATCTCCAGTGTCTCGTTGTCCAACCCACAGCTTCTCTGACC  
GAGAAGGATCATCCAGGTGTGAATGTGAAGATGGTACTACAGAGCTCCTTCTGATCCACCATACGTTGC  
ATGCACGAGGCTCCCTCTGCACCACAGAACCTTATTTTCAACATCAATCAAACGACTGTAAGTTTGGAA  
TGGAGTCTCCGGCTGACAACGGGGGAAGAAACGATGTCACCTACAGAATACTGTGTAAGCGGTGCAGTT  
GGGAACAGGGAGAATGTGTGCCATGCGGAAGTAACATTGGATACATGCCCCAGCAGACAGGATTAGAGGA  
TAACTATGCTCACTGTGATGGACCTACTGCCCATGCAAATTAACCTTTCGAAGTTGAAGCTGTAATGGA  
GTTTCGGACTTAAGCAGATCCCAGAGGCTTTCGCTGCAGTTAGCATCACTACCGGTCAAGCAGCTCCCT  
CGCAAGTGAGTGGAGTCATGAAGGAGCGAGTACTGCAGCGGAGTGTGCAGCTTTCCTGGCAGGAGCCGGA  
GCATCCCAATGGAGTCATCACCGAATATGAAATCAAGTATTATGAGAAAGATCAACGGGAAAGGACGTAC  
TCAACACTCAAACCAAGTCCACCTCCGCTCCATTAATAATCTGAAACCGGGAACAGTGTATGTGTTTC



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AGATCCGGGCGGTCACTGCTGCCGGTTATGAAACTACAGCCCTAGGCTTGATGTTGCCACACTTGAGGA  
 AGCTTCAGGTAATAATGTTTGAAGCGACAGCAGTCTCCAGTGAACAGAATCCTGTCATCATAATTGCTGTA  
 GTGGCTGTAGCAGGGACCATCATCTTGGTGTTCATGGTGTTCGGCTTCATCATTGGAAGAAGGCACTGTG  
 GTTATAGCAAGGCTGACCAAGAAGGGGATGAAGAACTCTACTTTCATTGCACAAAACCTACATTGACCC  
 TGAACCTATGAGGACCCAAATAGAGCTGTCCATCAATTCGCCAAGGAGCTAGATGCCTCCTGTATTA  
 ATTGAGCGTGTGATTGGTGCAGGAGAATTTGGAGAAGTTTGCAGTGGTCGTTTGAACCTCCGGGGAAGA  
 GAGATGTTGCAGTGGCCATAAAAACCTGAAAGTTGGTTACACAGAAAAACAAGGAGGGACTTTTTATG  
 CGAAGCAAGCATCATGGGGCAATTTGACCACCAATGTCTGCCATTTGGAAGGGTTGTTACAAGAGGG  
 AAGCCTGTCATGATTGTGATAGAGTTTCATGGAGAATGGAGCCCTGGATGCATTTCTCAGGAAACACGATG  
 GGCAGTTTACAGTCATTAGTTGGTAGGAATGCTGAGAGGTATTGCCGCTGGGATGCGATACTTGGCTGA  
 TATGGGATACGTTACAGGGACCTTGCAGCAGCAACATCCTTGTCAACAGCAATCTTGTGTTGAAAGTG  
 TCAGATTTTGGCCTTCCCGGTTATAGAGGATGATCCCGAAGCTGTCTACACCACGACTGGTGGAAAA  
 TTCCAGTAAGGTGGACTGCACCGAAGCCATTCAATACCGGAAGTTCACCTCAGCCAGCGATGTGTGGAG  
 CTATGGGATTGTCATGTGGGAAGTGTCTTATGGAGAAAGACCTTACTGGGACATGTCAATCAAGAT  
 GTCATTAAGCGATAGAAGAAGTTATCGTTTCCCGCGCCCATGGATTGCCAGCTGGTCTTACCAGC  
 TAATGCTGGATTGTTGGCAGAAAGATCGGGCGAAAGGCCAAAGTTTGAAGCAGATAGTCGGAATTCTAGA  
 CAAAATGATTCGAAACCAAGTAGTCTGAAAACACCCCTGGGAATTGTAGTAGCCCATAGCCCTCTT  
 CTGGACCAGACTCCTGACTTCACTGCTTCTGTTTCAAGTGGAGAATGGTTGCAAGCTATTAATG  
 AAAGGTATAAGGACAACCTCACAGCAGCGGGTTACAACCTCACTCGAGTCAGTGGCCAGGATGACTATCGA  
 TGATGTGATGAGTTTAGGGATCACACTGGTTGGCCATCAAAGAAGATCATGAGCAGCATCCAGACTATG  
 CGGGCACAAATGTTGCATTTACACGGAACAGGCATCCAAGTG

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR211406 representing BC026153  
 Red=Cloning site Green=Tags(s)

MVVQTRFSPSWIILCYIWLGFHTGEAQAQKEVLLLDLSKAQQTELEWISSPPSGWEEISGLDENYPIRT  
 YQVCQVMEPNQNNLRTNWI SKGNAQRIFVELKFTLRDCNSLPGVLGTCKETFNLYYYETDYDTGRNIRE  
 NLYVKIDTIAADESFTQGD LGERKMKLNTEVREIGPLSKKGFYLA FQDVGACIALVSVKVYYKCKWSIVE  
 NLA VFPDVTGSEFSSLVEVRGTCVSSAE EEAENSPRMHCSAEGEWLVP I GKICKAGYQQKGDTCPECG  
 RRFYKSSQDLQCSRCPTHSFSDREGSSRCECEDGYRAPSDPPYVACTRPPSAPQNLIFNINQTTVSLE  
 WSPPADNGGRNDVYRILCKRCSWEQGEVPCGSNIGYMPQQTGLEDNVYVMDLLAHANYTFEVEAVNG  
 VSDL SRSQRLFAAVSITGQAAPSQVSGVMKERV LQRSVQLSWQEPEHPNGVITEYEIKYYEKDQRERTY  
 STLKTKSTSASINNLKPGTVYVFQIRAVTAAGYGNYSRDLVATLEEASGKMFEATAVSSEQNPV I IAV  
 VAVAGT IILVFMVFGFIIGRRHCGYSKADQEGDEELYFHCTKYIDPETYEDPNRAVHQFAKELDASC I K  
 IERVIGAGEFGEVCSGRLKLPGRDVAVAIKTLKVGYTEKQRRDFLCEASIMGQFDHPNVVHLEGGVTRG  
 KPVMIVIEFMENGALDAFLRKHDGQFTVIQLVGMLRGI AAGMRYLADMGYVHRDLAARNILVNSNLVCKV  
 SDFGLSRVIEDDPEAVYTTTGGKIPVRWTAPEAIQYRKFTSASDVWSYGI VMWEVMSYGERPYWDMNSQD  
 VIKAIIEGYRLPAPMDCPAGLHQLMLDCWQKDRAPERKFEQIVGILDKMIRNPSSLKTPLTGCSRPI SPL  
 LDQSTPDFTAFCSVGEWLQAIKMERYKDNFTAAGYNSLESVARMITDDVMSLGITLVGHQKKIMSSIQTM  
 RAQMLHLHGTGIQV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

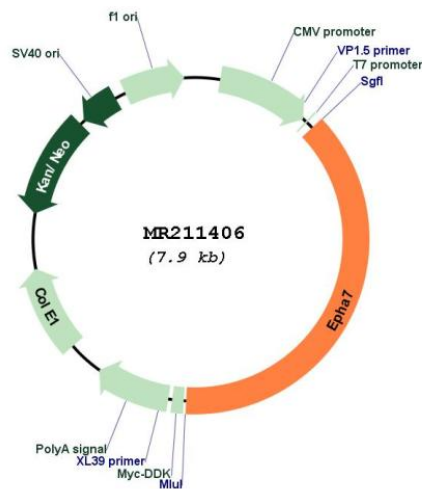
Cloning Scheme:

Cloning sites used for ORF Shuttling:



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

Plasmid Map:



ACCN: BC026153  
 ORF Size: 2982 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">BC026153.1</a>
<b>RefSeq Size:</b>	3554 bp
<b>RefSeq ORF:</b>	2984 bp
<b>Locus ID:</b>	13841
<b>Cytogenetics:</b>	4 12.42 cM
<b>MW:</b>	130.2 kDa
<b>Gene Summary:</b>	Receptor tyrosine kinase which binds promiscuously GPI-anchored ephrin-A 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. Among GPI-anchored ephrin-A ligands, EFNA5 is a cognate/functional ligand for EPHA7 and their interaction regulates brain development modulating cell-cell adhesion and repulsion. Has a repellent activity on axons and is for instance involved in the guidance of corticothalamic axons and in the proper topographic mapping of retinal axons to the colliculus. May also regulate brain development through a caspase(CASP3)-dependent proapoptotic activity. Forward signaling may result in activation of components of the ERK signaling pathway including MAP2K1, MAP2K2, MAPK1 AND MAPK3 which are phosphorylated upon activation of EPHA7. Isoform 4 which lacks the kinase domain may regulate isoform 1 adhesive properties.[UniProtKB/Swiss-Prot Function]