

## Product datasheet for **MG210806**

### **Epha5 (BC057401) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Epha5 (BC057401) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Epha5
Synonyms:	Ehk1, Hek7, Rek7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG210806 representing BC057401  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATCGGGGCTCCGGGCCCGCGGTGCGGGACACCGACGGACCCAGGGCAGAGGTGGCGGCACGACACCC  
 CCCGCGTCCCTGCCTCTCTGGCAGGCTGCTATTCGGCACCTCTAAAGGGCCCCCTGGACGTGCCTTCT  
 CTTGTGTGCGGCCTCCGGACCCCTTTGGCCAGCCCCAGCAACGAAGTAATTTGTTGGATTTCGCGCACT  
 GTCATGGGGACCTTGGATGGATTGCTTTTCCAAAGAACGGGTGGGAAGAGATTGGTGAAGTTGATGAGA  
 ACTATGCCCCATCCACACATACCAAGTGTCAAAGTTATGGAACAGAATCAGAATAATTGGCTGTTGAC  
 CAGTTGGATCTCTAACGAAGGTGCTTCCAGAATCTTTATTGAACTCAAGTTTACTTTAAGGGACTGCAAC  
 AGCCTTCTGGAGGACTGGGACTTGTAAAGGACATTTAACATGTATTATTTGAATCAGATGATGAGA  
 ATGGGAGAAGTATCAAAGAGAACCAATACATCAAGATTGATACCATCGCTGCAGATGAGAGCTTCACAGA  
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 GGATTTTATCTTGCTTTCCAAGATGTCGGTGTGCTGATTGCTCTGGTTTCTGTCCGTGTCTACTATAAAA  
 AGTGTCCCTCTGTAGTAAGACACTTGGCTATCTTCCCTGACACTATCACTGGAGCAGATTATCACAGTT  
 GTTAGAGGTGTCAGGCTCCTGCGTCAACCATCTGTGACAGATGATCCTCCCAAGATGCATTGCAGTGT  
 GAAGGGGAGTGGCTGGTCCCATTTGGGAAATGCATGTGCAAGGCTGGATATGAAGAGAAAAATGGTACCT  
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 GCAAGAGCCAGATCGCCCCAATGGAATTATCCTGGAGTATGAAATCAAGTACTTTGAAAAGGACCAAGAG  
 ACCAGTTACACAATTCAAGTCTAAAGAGACCAGTATTACAGCCGAGGGCTGAAACCTGCATCTGTGT  
 ATGTTTCCAAATTCGAGCACGTACAGCAGCAGGCTACGGCGTCTTCAGTCAAGATTGAGTTTGAAC  
 CACACCAGTGTTCGAGCATCTAATGATCAAAGCCAGATTTCCCATCATTGCAAGTGTGACAGTGGGA  
 GTCATCTTGTGGCAGTATGATCGGCTTCTCCTCAGTGGCAGGCGGTGTGGCTACAGCAAAGCAAAGC  
 AGGATCCAGAAGAGGAAAAGATGCACTTTCATAACGGGCACATTAAGTCCAGGAGTCAAGACCTATAT  
 TGATCCGCACACTTATGAAGATCCCAATCAAGCTGTTTCAATTTGCGAAGGAGATTGAAGCTTATGC  
 ATCACCATTGAGAGAGTATCGGAGCAGGTGAATTTGGTGAAGTTGCAAGTGGACGTTTGAAGTACCTG  
 GAAAAAGAGAATTACCTGTGGCTATCAAACTCTTAAAGTAGGCTATACTGAAAAGCAGCGCAGAGATTT  
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 AAAAGCAAACCTGTGATGATAGTGACAGAGTACATGGAGAACGGCTCCTTAGACACGTTTTTAAAGAAA  
 ACGATGGGCAGTTCAGTGTGATTGAGCTTGTGGCATGCTGAGAGGCATCGCTGCAGGAATGAAGTACCT  
 TTCTGACATGGGCTACGTGCATAGAGACCTTGCTGCTAGAAACATCTTAATCAACAGTAACCTTGTGTGC  
 AAGGTGTCTGACTTTGGACTTTCCAGGGTACTGGAAGATGATCCTGAGGCAGCCTACACCACAAGGGGAG  
 GCAAAATCCAAATCAGATGGACTGCCCGGAGGCAATAGCTTTTCGAAAGTTCACCTCTTCCAGTATGT  
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 CAGGATGTGATCAAGGCAGTAGAAGAAGGCTACCGCTGCCAAGCCCCATGGATTGCCCTGCTGCTCTCT  
 ATCAATTAATGCTGGATTGCTGGCAGAAAGATCGAAACAGCAGGCCCAAGTTTGAATGAAATCGTCAACAT  
 GCTGGACAAACTGATACGAAACCCAAGTGTCTGAAGACACTGGTGAATGCGTCGAGCAGAGTGTCTACA  
 TTGTTGGCAGAACATGGTTCTTTGGGGTCTGGGGCTACAGATCAGTAGGTGAATGGCTGGAAAGCAATCA  
 AAATGGTTCGGTACAGAGATTTTTCATGGAAAATGGATACAGTTCAATGGACGCTGTGGCTCAGGTGAC  
 CTTGGAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

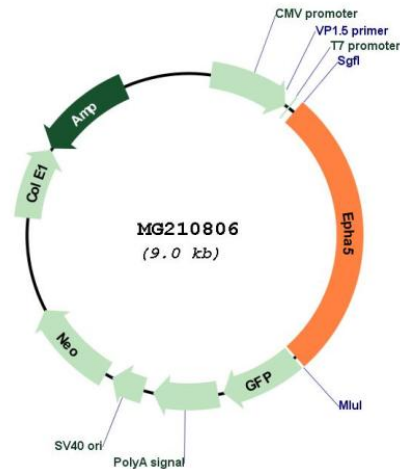
**Protein Sequence:** >MG210806 representing BC057401  
Red=Cloning site Green=Tags(s)

MRGSGPRGAGHRRTQGRGGDDTPRVPASLAGCYSAPLKGPLWTCLLLCAALRLLASPSNEVNLLDSRT  
VMGDLGWIAFPKNGWEEIGEVDENYAPIHTYQVCKVMEQNQNNWLLTSWISNEGASRIFIELKFTLRDCN  
SLPGGLGTCKETFNMYFESDDENGRSIKENQYIKIDTIAADESFTELDLGDVMKLNTEVRDVGPLSKK  
GFYLAFQDVGACIALVSVRVYKCKPSVVRHLAIFPDTITGADSSQLLEVSGSCVNHSVTDDPPKMHC  
EGEWLVPIGKCMCKAGYEEKNGTCQAPSPVTNVKKGKIAKNSISLSWQEPDRPNGIILEYEIKYFEKDQE  
TSYTIKSKETSITAEGLPASVYVFQIRARTAAGYGVFSRRFEFETTPVFAASNDQSQIPIIAVSVTVG  
VILLAVMIGFLLSGRRCGYSAKQDPEEEKMHFHNGHIKLPVVRTYIDPHTYEDPNQAVHEFAKEIEASC  
ITIERVIGAGEFGEVCSGRLKLPKRELPAIKTLKVGYTEKQRRDFLGEASIMGQFDHPNIIHLEGVVT  
KSKPVMIVTEYMENGLDFTLKKNDGQFTVIQLVGMLRGIAGMKYLSDMGYVHRDLAARNILINSNLVC  
KVSDFGLSRVLEDDPEAAAYTTRGGKIPRWTAPEAIAFRKFTSSSDVWSYIVMWEVVSYGERPYWEMTN  
QDVIKAVEEGYRLPSPMDCPAALYQLMLDCWQKDRNSRPKFDEIVNMLDKLIRNPSLKLTVNASSRVST  
LLAEHGSLGSGAYRSVGEWLEAIKMGRYTEIFMENGYSSMDAVAQVTLE

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-Mlul



**Plasmid Map:**


**ACCN:** BC057401

**ORF Size:** 2457 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:** [BC057401.1](#)

**RefSeq Size:** 4018 bp

**RefSeq ORF:** 2459 bp

**Locus ID:** 13839

**Cytogenetics:** 5 43.0 cM

**Gene Summary:**

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 most probably constitutes the cognate/functional ligand for EPHA5. Functions as an axon guidance molecule during development and may be involved in the development of the retinotectal, entorhino-hippocampal and hippocamoseptal pathways. Together with EFNA5 plays also a role in synaptic plasticity in adult brain through regulation of synaptogenesis. In addition to its function in the nervous system, the interaction of EPHA5 with EFNA5 mediates communication between pancreatic islet cells to regulate glucose-stimulated insulin secretion. [UniProtKB/Swiss-Prot Function]