

## Product datasheet for MR226172

### Efna1 (NM\_010107) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Efna1 (NM\_010107) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Efna1  
**Synonyms:** AI325262; B61; Efl1; Epl1; Eplg1; Lerk1  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR226172 representing NM\_010107  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGC**C

ATGGAGTTCCTTTGGGCCCTCTCTTGGGTCTGTGCTGCAGTCTGGCCGCTGCTGACCGCCACATCGTCT  
 TCTGGAACAGTTCAAATCCCAAGTTCCTGAGGAGGACTACACGGTGCACGTGCAGCTGAATGACTACCT  
 AGACATCATCTGCCACATTACGAGGACGACTCTGTGGCAGATGCAGCCATGGAGCGATACACACTGTAC  
 ATGGTGAACACCAGGAGTATGTGGCATGCCAACCCAGTCCAAGGACCAGGTCCGTTGGAATTGCAACC  
 GGCCAGTGCCAAGCATGGCCCGGAGAAGCTGTCTGAGAAATCCAGCGCTTACGCCTTTATCTTGGG  
 CAAGGAGTTCAAGGAAGGACACAGCTACTACTACATCTCCAAACCTATCTACCATCAGGAATCCCAGTGC  
 TTGAAGCTGAAGGTGACTGTCAATGGCAAAATCACTCATAATCCCAGGCCCATGTCAACCCACAGGAGA  
 AGAGACTCCAAGCAGATGACCCGGAAGTACAGGTTTTGCACAGCATTGGTTACAGTGCCGCCCCCGCCT  
 CTTCCACTGGTCTGGGCAGTATTGCTCCTACCACTGCTGCTGCTGCAATCTCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR226172 representing NM\_010107  
 Red=Cloning site Green=Tags(s)

MEFLWAPLLGLCCSLAAADRHIVFNSSNPKFREEDYTVHVQLNDYLDIICPHYEDDSVADAAMERYTLY  
 MVEHQEYVACQPQSKDQVRWNCNRPSAKHGPEKLSKFRFTPFILGKEFKEGHSYYYISKPIYHQESQC  
 LKLVTVNGKITHNPQAHVNPQEKRLQADDPEVQVLHLSIGYSAAPRLFPLVWAVLLLLPLLLLQSQ

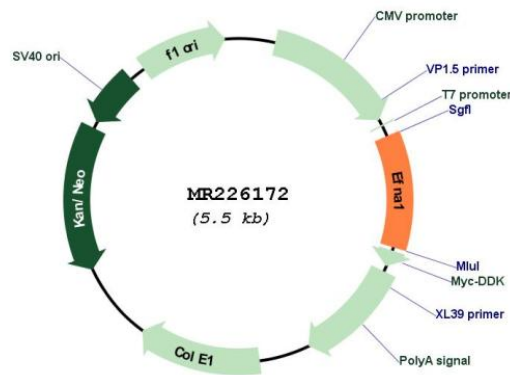
**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_010107

**ORF Size:** 615 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\\_010107.4](#), [NP\\_034237.3](#)

**RefSeq Size:** 1483 bp

**RefSeq ORF:** 618 bp

**Locus ID:** 13636

**UniProt ID:** [P52793](#)

**Cytogenetics:** 3 39.04 cM

**MW:** 24.3 kDa

**Gene Summary:** Cell surface GPI-bound ligand for Eph receptors, a family of receptor tyrosine kinases which are crucial for migration, repulsion and adhesion during neuronal, vascular and epithelial development. Binds promiscuously Eph receptors residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. Plays an important role in angiogenesis and tumor neovascularization. The recruitment of VAV2, VAV3 and PI3-kinase p85 subunit by phosphorylated EPHA2 is critical for EFNA1-induced RAC1 GTPase activation and vascular endothelial cell migration and assembly. Exerts anti-oncogenic effects in tumor cells through activation and down-regulation of EPHA2. Activates EPHA2 by inducing tyrosine phosphorylation which leads to its internalization and degradation. Acts as a negative regulator in the tumorigenesis of gliomas by down-regulating EPHA2 and FAK. Can evoke collapse of embryonic neuronal growth cone and regulates dendritic spine morphogenesis. [UniProtKB/Swiss-Prot Function]