

Product datasheet for MR200656

Egln1 (NM_053207) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Egln1 (NM_053207) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Egln1
Synonyms: AI503754; C1orf12; Hif-p4h-2; HIF-PH2; HPH-2; ORF13; Phd2; SM-20
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR200656 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGTTGCTTGTACCCAGGCAACGGAACAGGCTATGTCCGTCACGTTGATAACCCAAATGGAGATGGAA
 GATGCGTGACATGTATATATTATCTAAATAAAGACTGGGACGCCAAGGTAAGTGGAGGATTCTTCGAAT
 TTTTCCAGAAGGCAAAGCCAGTTTGTGACATTGAACCCAAATTTGATAGACTGCTGTTTTTCTGGTCT
 GACCGCGTAACCCTCATGAAGTACAGCCAGCATACGCCACAAGGTACGCAATAACTGTTTGGTATTTG
 ATGCAGATGAGCGAGCGAGAGCTAAAGTAAAATATCTAACAGGTGAGAAAGGTGTGAGGGTTGAAGTCAA
 GCCAATTCAGTCAGCAAAGACGTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR200656 protein sequence
 Red=Cloning site Green=Tags(s)
 MVACYPNGTGYVRHVDNPNPNDGRCVTCIYYLNKDWDAKVSSGILRIFPEGKAQFADIEPKFDRLLFFWS
 DRRNPHEVQPAYATRYAITVWYFDADERARAKVKYLTGEKGVVVELKPNVSKDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI



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Cloning Scheme:


ACCN: NM_053207

ORF Size: 378 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](#)

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_053207.1](#), [NP_444437.1](#)

RefSeq Size: 3524 bp

RefSeq ORF: 1203 bp

Locus ID: 112405

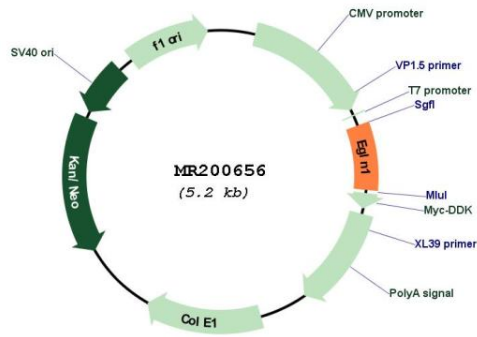
UniProt ID: [Q91YE3](#)

Cytogenetics: 8 E2

MW: 14.3 kDa

Gene Summary: Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A. Also hydroxylates HIF2A. Has a preference for the CODD site for both HIF1A and HIF1B. Hydroxylated HIFs are then targeted for proteasomal degradation via the von Hippel-Lindau ubiquitination complex. Under hypoxic conditions, the hydroxylation reaction is attenuated allowing HIFs to escape degradation resulting in their translocation to the nucleus, heterodimerization with HIF1B, and increased expression of hypoxia-inducible genes. EGLN1 is the most important isozyme under normoxia and, through regulating the stability of HIF1, involved in various hypoxia-influenced processes such as angiogenesis in retinal and cardiac functionality. Target proteins are preferentially recognized via a LXXLAP motif.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR200656