

Product datasheet for MG200563

Egln3 (BC022961) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids

Product Name: Egln3 (BC022961) Mouse Tagged ORF Clone

Tag: TurboGFP

Symbol: Egln3

Synonyms: SM-20

Mammalian Cell Neomycin

Selection:

Vector: pCMV6-AC-GFP (PS100010)

E. coli Selection: Ampicillin (100 ug/mL)

ORF Nucleotide >MG200563 representing BC022961

Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC

GCCGCGATCGCC

ATGGTGGCTTGCTATCCAGGAAATGGGACAGGTTATGTTCGCCATGTGGACAACCCCAATGGTGATGGCC GCTGTATCACCTGTATCTACCTGAATAAGAATTGGGACGCCAAGTTACACGGAGGGGTCCTGCGGAT ATTTCCGGAAGGGAAATCGTTTGTAGCAGACGTGGAGCCCATTTTTGACAGACTTCTGTTCTTCTGGTCA GACCGCAGGAATCCACATGAAGTCCAGCCCTCCTATGCCACCAGGTACGCTATGACTGTCTGGTACTTCG ATGCTGAAGAAAGGCCAAAAAAGAAATTCAGGAAATTTAACTAGAAAAAACTGAATCTGCTCTTGC

TAAAGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG200563 representing BC022961

Red=Cloning site Green=Tags(s)

MVACYPGNGTGYVRHVDNPNGDGRCITCIYYLNKNWDAKLHGGVLRIFPEGKSFVADVEPIFDRLLFFWS

DRRNPHEVQPSYATRYAMTVWYFDAEERAEAKKKFRNLTRKTESALAKD

TRTRPLE - GFP Tag - V

Chromatograms: https://cdn.origene.com/chromatograms/ja2687 a05.zip

Restriction Sites: Sgfl-Mlul



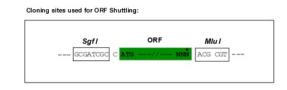
OriGene Technologies, Inc. 9620 Medical Center Drive, Ste 200

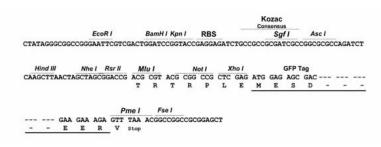
CN: techsupport@origene.cn

Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com



Cloning Scheme:





ACCN: BC022961 **ORF Size:** 357 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 customercom 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

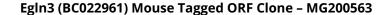
variants is recommended prior to use. More info

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:
 BC022961

 RefSeq Size:
 2156 bp

 RefSeq ORF:
 359 bp

 Locus ID:
 112407

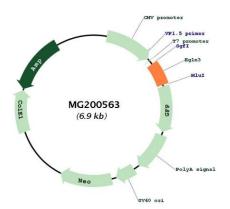
 Cytogenetics:
 12 C1

Gene Summary: Plays a crucial role in DNA damage response (DDR) by hydroxylating TELO2, promoting its

interaction with ATR which is required for activation of the ATR/CHK1/p53 pathway (By similarity). Cellular oxygen sensor that catalyzes, under normoxic conditions, the posttranslational 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 HIF2A. Hydroxylation on the NODD site by EGLN3 appears to require prior hydroxylation on the CODD site. 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 hypoxy-inducible genes. ELGN3 is the most important isozyme in limiting physiological activation of HIFs (particularly HIF2A) in hypoxia. Also hydroxylates PKM in hypoxia, limiting glycolysis. Under normoxia, hydroxylates and regulates the stability of ADRB2. Regulator of cardiomyocyte and neuronal apoptosis. In cardiomyocytes, inhibits the anti-apoptotic effect of BCL2 by disrupting the BAX-BCL2 complex. In neurons, has a NGFinduced proapoptotic effect, probably through regulating CASP3 activity. Also essential for hypoxic regulation of neutrophilic inflammation. Target proteins are preferentially recognized via a LXXLAP motif.[UniProtKB/Swiss-Prot Function]



Product images:



Circular map for MG200563