Recombinant Mouse EGLN3 Protein (2-239 aa), His-tagged

Cat. No. EGLN3-1277M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse EGLN3 Protein (2-239 aa) is produced by E. coli expression system. This protein is fused with a 6xHis tag at the N-terminal. Protein Description: Full Length of Mature Protein.
Species	Mouse
Source	E.coli
ProteinLength	2-239 aa
Description	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 . 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 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

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	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 NGF-induced proapoptotic effect, probably through regulating CASP3 activity. Also essential for hypoxic regulation of neutrophilic inflammation. Target proteins are preferencially recognized via a LXXLAP motif.1 Publication.
Form	Tris-based buffer,50% glycerol
Molecular Mass	31.2 kDa
AA Sequence	PLGHIMRLDLEKIALEYIVPCLHEVGFCYLDNFLGEVVGDCVLERVKQLHYNGALRD GQLAGPRAGVSKRHLRGDQITWIGGNEEGCEAINFLLSLIDRLVLYCGSRLGKYYVK ERSKAMVACYPGNGTGYVRHVDNPNGDGRCITCIYYLNKNWDAKLHGGVLRIFPEG KSFVADVEPIFDRLLFFWSDRRNPHEVQPSYATRYAMTVWYFDAEERAEAKKKFRN LTRKTESALAKD
Purity	> 90% as determined by SDS-PAGE.
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.
Concentration	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.

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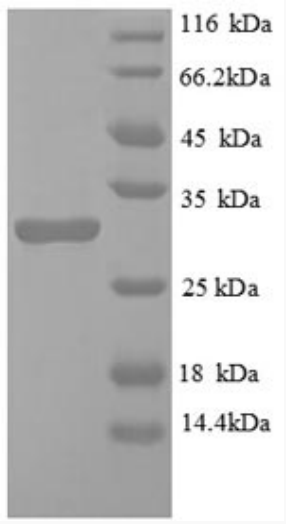
GENE INFORMATION

Gene Name	Egln3 EGL nine homolog 3 (C. elegans) [Mus musculus]
Official Symbol	EGLN3
Synonyms	EGLN3; HPH-3; HIF-PH3; Phd3; SM-20; AI505553; AI648162; Hif-p4h-3; 2610021G09Rik;
Gene ID	112407
mRNA Refseq	NM_028133
Protein Refseq	NP_082409
UniProt ID	Q91UZ4



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and

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	15% separation gel.

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