OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AR50433PU-N

EGLN3 / PHD3 (1-239, His-tag) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	EGLN3 / PHD3 (1-239, His-tag) human recombinant protein, 0.1 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MGSHMPLGHI MRLDLEKIAL EYIVPCLHEV GFCYLDNFLG EVVGDCVLER VKQLHCTGAL RDGQLAGPRA GVSKRHLRGD QITWIGGNEE GCEAISFLLS LIDRLVLYCG SRLGKYYVKE RSKAMVACYP GNGTGYVRHV DNPNGDGRCI TCIYYLNKNW DAKLHGGILR IFPEGKSFIA DVEPIFDRLL FFWSDRRNPH EVQPSYATRY AMTVWYFDAE ERAEAKKKFR NLTRKTESAL TED
Tag:	His-tag
Predicted MW:	29.8 kDa
Concentration:	lot specific
Purity:	0.25 mg/ml (determined by Bradford assay)
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 50% glycerol, 0.3M NaCl, 5 mM DTT, 2 mM EDTA
Preparation:	Liquid purified protein
Protein Description:	Recombinant human EGLN3 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
Storage:	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_001295032
Locus ID:	112399
UniProt ID:	Q9H6Z9, Q3T1B0, F8W1G2, B3KVT0
Cytogenetics:	14q13.1
Synonyms:	HIFP4H3; HIFPH3; PHD3

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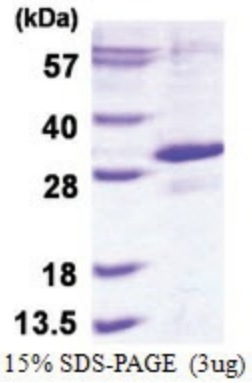
Summary: Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A. Also hydroxylates HIF2A. Has a preference for the CODD site for both HIF1A and 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. EGLN3 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 NGF-induced proapoptotic effect, probably through regulating CASP3 activity. Also essential for hypoxic regulation of neutrophilic inflammation. 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. Target proteins are preferentially recognized via a LXXLAP motif.[UniProtKB/Swiss-Prot Function]

Protein Families: Druggable Genome

Protein Pathways: Pathways in cancer, Renal cell carcinoma

Product images:



15% SDS-PAGE (3ug)