

Datasheet for ABIN7564819
PHD1 Protein (AA 1-419) (His tag)



[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	PHD1 (EGLN2)
Protein Characteristics:	AA 1-419
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PHD1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Egln2 Protein expressed in mammalian cells.
Sequence:	<p>MDSPCQPQAL NQALPQLPGS VSESLESSRA RMGVESYLPC PLLPAYHRPG ASGEASAGNG TPRTTATATT TTASPLREGF GGQDGGELWP LQSEGAAALV TKECQLAAQ GARPEAPKRK WAKDGGDAPS PSKRPWARQE NQEAKGESGM GCDSGASNSS SSSSNTTSSS GEASARLREE VQPSAPERLA LDYIVPCMR YGICVKDNFL GAVLGGRVLA EVEALKWGGR LRDGQLVSQR AIPPRSIRGD QIAWVEGHEP GCRSIGALMA HVDAVIRHCA GRLGNYVING RTKAMVACYP GNLGLGYVRHV DNPBGDGRCI TCIYYLNQNW DVKVHGGLLQ IFPEGRPVVA NIEPLFDRLL IFWSDRRNPH EVKPAYATRY AITVWYFPAK ERAAARDKYQ LASGQKGVQV PVSQPTTPT</p> <p>Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary.</p> <p>In case you have a special request, please contact us.</p>
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Product Details

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity:

> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

Grade:

custom-made

Target Details

Target:

PHD1 (EGLN2)

Alternative Name:

Egln2 ([EGLN2 Products](#))

Background:

Prolyl hydroxylase EGLN2 (EC 1.14.11.-) (Egl nine homolog 2) (EC 1.14.11.29) (Falkor) (Hypoxia-inducible factor prolyl hydroxylase 1) (HIF-PH1) (HIF-prolyl hydroxylase 1) (HPH-1) (Prolyl hydroxylase domain-containing protein 1) (PHD1),FUNCTION: Prolyl hydroxylase that mediates hydroxylation of proline residues in target proteins, such as ATF4, IKBKB, CEP192 and HIF1A (PubMed:24809345). Target proteins are preferentially recognized via a LXXLAP motif (By similarity). Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins (PubMed:18176562, PubMed:19587290, PubMed:21083501). Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A (PubMed:18176562, PubMed:19587290, PubMed:21083501). Also hydroxylates HIF2A (PubMed:18176562, PubMed:19587290, PubMed:21083501). Has a preference for the CODD site for both HIF1A and HIF2A (PubMed:18176562, PubMed:19587290, PubMed:21083501). Hydroxylated HIFs are then targeted for proteasomal

Target Details

degradation via the von Hippel-Lindau ubiquitination complex (PubMed:18176562, PubMed:19587290, PubMed:21083501). 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 (PubMed:18176562, PubMed:19587290, PubMed:21083501). EGLN2 is involved in regulating hypoxia tolerance and apoptosis in cardiac and skeletal muscle (PubMed:18176562, PubMed:19587290, PubMed:21083501). Also regulates susceptibility to normoxic oxidative neuronal death (PubMed:18176562, PubMed:19587290, PubMed:21083501). Links oxygen sensing to cell cycle and primary cilia formation by hydroxylating the critical centrosome component CEP192 which promotes its ubiquitination and subsequent proteasomal degradation (By similarity). Hydroxylates IKBKB, mediating NF-kappa-B activation in hypoxic conditions (By similarity). Also mediates hydroxylation of ATF4, leading to decreased protein stability of ATF4 (PubMed:24809345). {ECO:0000250|UniProtKB:Q96KS0, ECO:0000269|PubMed:18176562, ECO:0000269|PubMed:19587290, ECO:0000269|PubMed:21083501, ECO:0000269|PubMed:24809345}.

Molecular Weight: 45.1 kDa

UniProt: [Q91YE2](#)

Pathways: [Intracellular Steroid Hormone Receptor Signaling Pathway](#), [Cell RedoxHomeostasis](#)

Application Details

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months