

PHD2 recombinant protein

Recombinant PHD2 (EGLN1) protein

CATALOG # AAA60116	HOST Baculovirus
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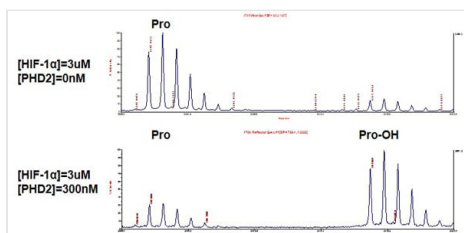
PRODUCT SYNONYMS

PHD2; Recombinant PHD2 (EGLN1) protein; Egl-9 Family Hypoxia Inducible Factor 1; Hypoxia-Inducible Factor Prolyl Hydroxylase 2; HIF Prolyl Hydroxylase 2; PHD2 recombinant protein

PRODUCT SPECIFICATIONS

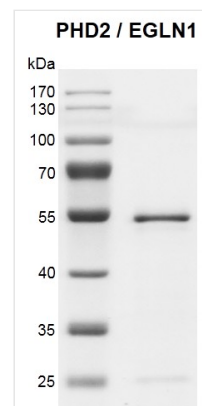
Host	Baculovirus
Form/Format	Recombinant PHD2/EGLN1 protein is supplied in 25mM HEPES-NaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100 and 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Notes	This product was manufactured as described in Protein Details. Where possible, We has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

MALDI-TOF for PHD2 (EGLN1) protein activity 3 uM HIF1A (HIF-1α) peptide (peptide sequence: biotin-DLDLEALAPYIPADDDFQL) was incubated with 300 nM PHD2 (EGLN1) protein in a 30 ul reaction system containing 20 mM Tris-HCl pH 7.5, 5 mM KCl, 1.5 mM MgCl₂, 1 mM DTT, 100 uM 2-oxoglutarate, 100 uM ascorbate and 50 uM (NH₄)₂Fe(SO₄)₂·6H₂O for 2 hr at 37°C. Single 3 uM HIF1A peptide was used as negative control. MALDI-TOF was used for detection.



SDS-PAGE

Recombinant PHD2 (EGLN1) protein gel 10% SDS-PAGE gel with Coomassie blue staining
MW: 47 kDa Purity: > 90%

ADDITIONAL INFORMATION

Related Product Information for PHD2 recombinant protein	Short Description: Recombinant human PHD2 (EGLN1) protein was expressed in a baculovirus expression system as the full-length protein (accession number NP_071334.1) with an N-terminal DYKDDDDK tag. The molecular weight of the protein is 47 kDa. It is suitable for use in binding assays, inhibitor screening, and selectivity profiling. Background: Prolyl Hydroxylase Domain-Containing Protein 2 (PHD2) or Egl-9 Family Hypoxia Inducible Factor 1 (EGLN1), also known as HIF-PH2 or HPH-2, is a prolyl hydroxylase. PHD3 is a cellular oxygen sensor that catalyzes the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins under normoxic conditions. It can hydroxylate a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A, also HIF2A. PHD1 has a preference for the CODD site for both HIF1A and HIF2A. Hydroxylated HIFs are 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. PHD2 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. Its target proteins are preferentially recognized via a LXXLAP motif.
Product Categories/Family for PHD2 recombinant protein	Recombinant Proteins; Transcription

NCBI AND UNIPROT INFORMATION

NCBI GI #	13489073
NCBI GeneID	54583
NCBI Accession #	NP_071334.1
NCBI GenBank Nucleotide #	NM_022051.2
UniProt Accession #	Q9GZT9; Q8N3M8; Q9BZS8; Q9BZT0
Molecular Weight	426
NCBI Official Full Name	egl nine homolog 1
NCBI Official Synonym Full Names	egl-9 family hypoxia-inducible factor 1
NCBI Official Symbol	EGLN1
NCBI Official Synonym Symbols	HPH2; PHD2; SM20; ECYT3; HPH-2; HIFPH2; ZMYND6; C1orf12; HIF-PH2
NCBI Protein Information	egl nine homolog 1; egl nine-like protein 1; HIF prolyl hydroxylase 2; HIF-prolyl hydroxylase 2; zinc finger MYND domain-containing protein 6; hypoxia-inducible factor prolyl hydroxylase 2; prolyl hydroxylase domain-containing protein 2
UniProt Protein Name	Egl nine homolog 1
UniProt Gene Name	EGLN1
UniProt Synonym Gene Names	HIF-PH2; HIF-prolyl hydroxylase 2; HPH-2; PHD2
UniProt Entry Name	EGLN1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.