Recombinant EGLN3 protein (His tag)

Catalog Number	548256
Synonyms	Egl nine homolog 3; HPH-1; Hypoxia-inducible factor prolyl hydroxylase 3; HIF-PH3; HIF-prolyl hydroxylase 3; HPH-3; Prolyl hydroxylase domain-containing protein 3; PHD3
Species	Human
Expression System	E. coli
Accession	Q9H6Z9
Molecular Weight	Predictes a molecular mass of 28.91 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	1-239
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-239 aa (Q9H6Z9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Prolyl hydroxylase EGLN3 (EC 1.14.11.29) fragment (amino acids 1-239) is a high-purity, functional protein encompassing the complete Fe2OG dioxygenase domain. This product serves as an essential tool for studying hypoxia signaling, proline hydroxylation mechanisms, and oxygen-sensing pathways in cellular and biochemical assays. EGLN3 (also known as PHD3 or HPH-3) is a crucial cellular oxygen sensor that catalyzes proline hydroxylation in target proteins under normoxic conditions. Its primary function involves hydroxylating specific proline residues in hypoxia-inducible factor alpha subunits (HIF1A and HIF2A), targeting them for proteasomal degradation via the von Hippel-Lindau complex. Beyond HIF regulation, EGLN3 hydroxylates multiple substrates including PKM (modulating glycolysis), TELO2 (activating DNA damage response), ATF4 (regulating stability), and ADRB2. The protein localizes to both nucleus and cytoplasm and plays significant roles in apoptosis regulation, neutrophilic inflammation, and cardiomyocyte function. This recombinant fragment retains the complete enzymatic domain necessary for investigating its fundamental hydroxylation activity and substrate interactions.