

Recombinant Human EGLN3

Catalog No: #GP10723

Package Size: #GP10723-1 100ug

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Description

Product Name	Recombinant Human EGLN3
Brief Description	Recombinant Protein
Immunogen Description	Fusion protein corresponding to a region derived from 1-239 amino acids of human EGLN3
Target Name	egl-9 family hypoxia inducible factor 3
Other Names	PHD3; HIFPH3; HIFP4H3
Accession No.	Swissprot:Q9H6Z9Gene Accession:BC064924
Uniprot	Q9H6Z9
GeneID	112399;
Storage	-20~-80°C, pH 7.6 PBS

Background

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 hypoxia-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.

References

Note: For in vitro research use only, not for diagnostic or therapeutic use. This product is not a medical device.

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