

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EGLN1/PHD2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) PHD1 and rhPHD3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human EGLN1/PHD2 Gln157-Phe426 Accession # Q9GZT9
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PHD2 (Prolyl Hydroxylase Domain-containing protein 2; also HPH2, EGLN1 and HIF-PH2) is a 45-47 kDa dioxygenase member of the PH family of enzymes. It is ubiquitously expressed, and serves to regulate the availability of the oxygen-sensitive HIF transcription factor. Active HIF1α is a heterodimer of α- and β-subunits and when intact, promotes VEGF and EPO production. The β-subunit is constitutively expressed, while α-subunit levels are regulated by intracellular oxygen concentration. At normoxic levels, the α-subunit is hydroxylated on Pro by one of three PHDs, inducing its ubiquitination/degradation. The hydroxylation event requires oxygen, and thus PH activity (particularly PHD2) is a measure of a cell's oxygen concentration. Human PHD2 is 426 amino acids (aa) in length. It contains an NES (aa 6-20), a Zn-finger region (aa 21-58), and a catalytic domain (aa 291-392). There are five nitrosylated cysteines plus one acetylated alanine. Two isoform variants are known, one that shows a deletion of aa 338-359, and another that contains a 17 aa substitution for aa 58-175. Over aa 157-426, human PHD2 shares 93% aa sequence identity with mouse PHD2.

PRODUCT SPECIFIC NOTICES

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