

PHD1/prolyl hydroxylase Rabbit mAb [5INI]

Cat NO. :A78983

Information:

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB,IHC,ICC/IF	H,M,R	Q96KS0	40,43 kDa	Rabbit	IgG	100ul,200ul

Applications detail:

Application	Dilution
WB	1:1000-2000
IHC	1:100
ICC/IF	1:100
The optimal dilutions should be determined by the end user	

Conjugate:

UnConjugate

Form:

Liquid

sensitivity:

Endogenous

Purification:

Protein A purification

Specificity:

Antibody is produced by immunizing animals with a synthetic peptide at the sequence of human PHD1/prolyl hydroxylase

Storage buffer and conditions:

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at-20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

Tissue specificity:

Expressed in adult and fetal heart, brain, liver, lung, skeletal muscle, and kidney. Also expressed in testis and placenta. Highest levels in adult brain, placenta, lung, kidney, and testis.

Subcellular location:

Nucleus.

Function:

Introduction: **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

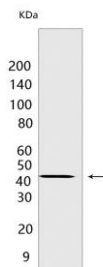
Cross Reactivity: **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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Prolyl hydroxylase that mediates hydroxylation of proline residues in target proteins, such as ATF4, IKBKB, CEP192 and HIF1A (PubMed:11595184, PubMed:12039559, PubMed:15925519, PubMed:16509823, PubMed:17114296, PubMed:23932902). Target proteins are preferentially recognized via a LXXLAP motif (PubMed:11595184, PubMed:12039559, PubMed:15925519). Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins (PubMed:11595184, PubMed:12039559, PubMed:12181324, PubMed:15925519, PubMed:19339211). Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A (PubMed:11595184, PubMed:12039559, PubMed:12181324, PubMed:15925519). Also hydroxylates HIF2A (PubMed:11595184, PubMed:12039559, PubMed:15925519). Has a preference for the CODD site for both HIF1A and HIF2A (PubMed:11595184, PubMed:12039559, PubMed:15925519). Hydroxylated HIFs are then targeted for proteasomal degradation via the von Hippel-Lindau ubiquitination complex (PubMed:11595184, PubMed:12039559, PubMed:15925519). 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:11595184, PubMed:12039559, PubMed:15925519). EGLN2 is involved in regulating hypoxia tolerance and apoptosis in cardiac and skeletal muscle (PubMed:11595184, PubMed:12039559, PubMed:15925519). Also regulates susceptibility to normoxic oxidative neuronal death (PubMed:11595184, PubMed:12039559, PubMed:15925519). 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 (PubMed:23932902). Hydroxylates IKBKB, mediating NF-kappa-B activation in hypoxic conditions (PubMed:17114296). Also mediates hydroxylation of ATF4, leading to decreased protein stability of ATF4 (By similarity)..

Validation Data:

PHD1/prolyl hydroxylase Rabbit mAb [5INI] Images



Western blot (SDS PAGE) analysis of extracts from A549 cells. Using PHD1/prolyl hydroxylase Rabbit mAb [5INI] at dilution of 1:1000 incubated at 4°C overnight.

View more information on <http://naturebios.com>

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.