

Rabbit PHD3 Monoclonal Antibody | anti-PHD3 antibody

PHD3 Rabbit mAb

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA269435	Rabbit	Human, Mouse, Rat	Immunoprecipitation, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

PHD3; Monoclonal Antibody; PHD3 Rabbit mAb; HIFPH3; HIFP4H3; anti-PHD3 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG
Clone Number	R04-3K9
Purity/Purification	Affinity Purified
Form/Format	50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Applicable Applications for anti-PHD3 antibody	IP (Immunoprecipitation), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	Recombinant protein of human PHD3
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.

IMAGES



IHC (Immunohistochemistry)

Immunohistochemistry analysis of paraffin-embedded Human colon cancer using PHD3 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



WB (Western Blot)

Western blot analysis of PHD3 in rat lung and mouse lung lysates using PHD3 antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PHD3 antibody	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. In cardiomyocytes, inhibits the anti-apoptotic effect of BCL2 by disrupting the BAX-BCL2 complex. In neurons, has a NGF-induced proapoptotic effect, probably through regulating CASP3 activity. Also essential for hypoxic regulation of neutrophilic inflammation. Plays a crucial role in DNA damage response (DDR) by hydroxylating TELO2, promoting its interaction with ATR which is required for activation of the ATR/CHK1/p53 pathway. Target proteins are preferentially recognized via a LXXLAP motif
Product Categories/Family for anti-PHD3 antibody	Primary Antibody

NCBI AND UNIPROT INFORMATION

NCBI GI #	32129515
NCBI GeneID	112399
UniProt Accession #	Q9H6Z9; Q2TA79; Q3B8N4; Q6P1R2
Molecular Weight	239
NCBI Official Full Name	Egl nine homolog 3
NCBI Official Synonym Full Names	egl-9 family hypoxia-inducible factor 3
NCBI Official Symbol	EGLN3
NCBI Official Synonym Symbols	PHD3; HIFPH3; HIFP4H3
NCBI Protein Information	egl nine homolog 3; HPH-1; HPH-3; HIF-PH3; HIF prolyl hydroxylase 3; HIF-prolyl hydroxylase 3; egl nine-like protein 3 isoform; hypoxia-inducible factor prolyl hydroxylase 3; prolyl hydroxylase domain-containing protein 3
UniProt Protein Name	Egl nine homolog 3
UniProt Gene Name	EGLN3
UniProt Synonym Gene Names	HIF-PH3; HIF-prolyl hydroxylase 3; HPH-3; PHD3
UniProt Entry Name	EGLN3_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.