

Rabbit PHD3 Polyclonal Antibody | anti-PHD3 antibody

PHD3 Antibody

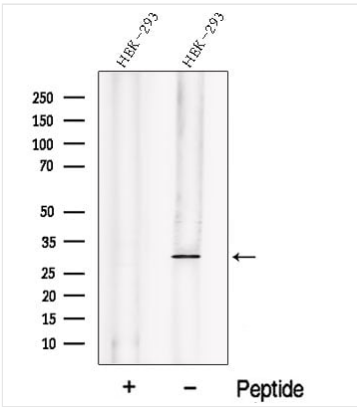
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA328701	Rabbit	Human, MousePredicted: Pig, Bovine, Horse, Sheep, Rabbit	Western Blot

PRODUCT SYNONYMS

PHD3; Polyclonal Antibody; PHD3 Antibody; Egl 9 family hypoxia inducible factor 3; Egl nine homolog 3 (C. elegans); Egl nine homolog 3; Egl nine like protein 3 isoform; EGL9 homolog of C. elegans 3; EGLN3; EGLN3_HUMAN; Factor responsive smooth muscle protein; HIF Prolyl Hydroxylase 3; HIF-PH3; HIF-prolyl hydroxylase 3; HIFP4H3; HIFPH3; HPH-1; HPH-3; Hypoxia-inducible factor prolyl hydroxylase 3; P4H3; Prolyl Hydroxylase Domain Containing Protein 3; Prolyl hydroxylase domain-containing protein 3; SM20; anti-PHD3 antibody

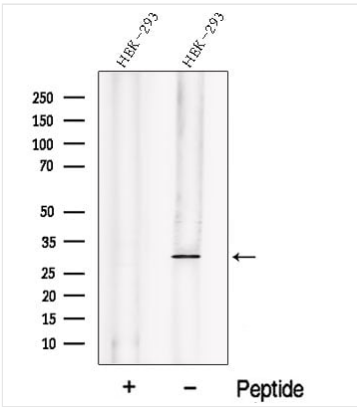
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse Predicted: Pig, Bovine, Horse, Sheep, Rabbit
Clonality	Polyclonal
Isotype	IgG
Specificity	PHD3 Antibody detects endogenous levels of PHD3.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Form/Format	Liquid; Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	239
Applicable Applications for anti-PHD3 antibody	WB (Western Blot)
Immunogen	A synthesized peptide derived from human PHD3.
Tissue Specificity	Widely expressed at low levels. Expressed at higher levels in adult heart (cardiac myocytes, aortic endothelial cells and coronary artery smooth muscle), lung and placenta, and in fetal spleen, heart and skeletal muscle. Also expressed in pancreas. Localized to pancreatic acini and islet cells.
Fragment	Fab Fragment
Conjugate	Unconjugated
Subcellular Location	Nucleus
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



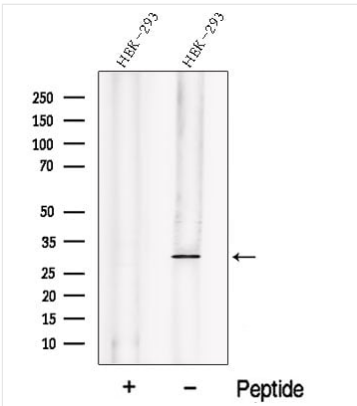
WB (Western Blot)

Western blot analysis of extracts from HEK-293 cells, using PHD3 Antibody. The lane on the left was treated with blocking peptide.



WB (Western Blot)

Western blot analysis of extracts from B16F10, using PHD3 Antibody. The lane on the left was treated with blocking peptide.Observed bands: 20 kDa.



IF (Immunofluorescence)

staining Hela cells by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(1:200) and mouse anti-beta tubulin Ab(1:200) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(1:200 Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(1:600 Green) were used as the secondary antibod

ADDITIONAL INFORMATION

Related Product Information for anti-PHD3 antibody	Description: 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. Subunit Structure: Interacts with WDR83; the interaction leads to almost complete elimination of HIF-mediated reporter activity (By similarity). Interacts with BCL2 (via its BH4 domain); the interaction disrupts the BAX-BCL4 complex inhibiting the anti-apoptotic activity of BCL2. Interacts with ADRB2; the interaction hydroxylates ADRB2 facilitating its ubiquitination by the VHL-E3 ligase complex. Interacts with PAX2; the interaction targets PAX2 for destruction. Interacts with PKM; the interaction hydroxylates PKM in hypoxia. Similarity: The Beta2beta3 'finger-like' loop domain is important for substrate (HIFs' CODD/NODD) selectivity.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	32129515
NCBI GeneID	112399
UniProt Accession #	Q9H6Z9
Molecular Weight	Observed: 28 kDa Predicted: 28 kDa
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
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.