

Rabbit PHD2 Polyclonal Antibody | anti-PHD2 antibody

Phospho-PHD2 (Ser125) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329227	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry

PRODUCT SYNONYMS

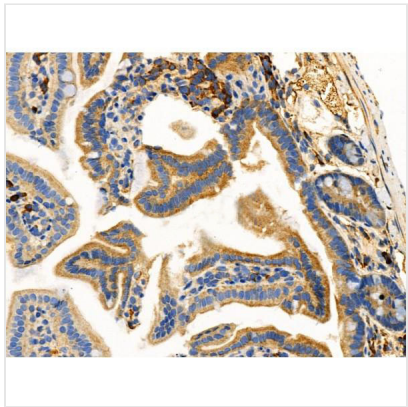
PHD2; Polyclonal Antibody; Phospho-PHD2 (Ser125) Antibody; C1ORF12; Chromosome 1 Open Reading Frame 12; DKFZp761F179; ECYT 3; ECYT3; Egl 9 family hypoxia inducible factor 1; EGL 9 homolog of C. elegans 1; EGL nine (C.elegans) homolog 1; Egl nine homolog 1 (C. elegans); Egl nine homolog 1; Egl nine like protein 1; EGLN 1; EglN1; EGLN1_HUMAN; HIF PH2; HIF Prolyl Hydroxylase 2; HIF-PH2; HIF-prolyl hydroxylase 2; HIFP4H 2; HIFPH2; HpH2; HPH-2; HPH2; Hypoxia inducible factor prolyl hydroxylase 2; Hypoxia-inducible factor prolyl hydroxylase 2; ORF13; P4H2; PHD 2; Phd2; PNAS 118; PNAS 137; Prolyl Hydroxylase Domain Containing Protein 2; Prolyl hydroxylase domain-containing protein 2; Rat Homolog of SM20; SM 20; SM-20; SM20; Zinc finger MYND domain containing protein 6; ZMYND6; anti-PHD2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-PHD2 (Ser125) Antibody detects endogenous levels of PHD2 only when phosphorylated at Ser125. Tissue Specificity: According to widely expressed with highest levels in skeletal muscle and heart, moderate levels in pancreas, brain (dopaminergic neurons of adult and fetal substantia nigra) and kidney, and lower levels in lung and liver. According to widely expressed with highest levels in brain, kidney and adrenal gland. Expressed in cardiac myocytes, aortic endothelial cells and coronary artery smooth muscle. According to; expressed in adult and fetal heart, brain, liver, lung, skeletal muscle and kidney. Also expressed in placenta. Highest levels in adult heart, brain, lung and liver and fetal brain, heart spleen and skeletal muscle.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PHD2 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human PHD2 around the phosphorylation site of Ser125.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	S-nitrosylation inhibits the enzyme activity up to 60% under aerobic conditions. Chelation of Fe (2+) has no effect on the S-nitrosylation. It is uncertain whether nitrosylation occurs on Cys-323 or Cys-326.
Subunit Structure	Monomer. Interacts with ING4; the interaction inhibits the hydroxylation of HIF alpha proteins. Interacts with PTGES3 (via PXLE motif); thereby recruiting EGLN1 to the HSP90 pathway to facilitate HIF alpha proteins hydroxylation. Interacts with LIMD1. Found in a complex composed of LIMD1, VHL, EGLN1/PHD2, ELOB and CUL2. Interacts with EPAS1. Interacts with CBFA2T3. Interacts with HIF1A.
Similarity	The beta (2)beta (3) 'finger-like' loop domain is important for substrate (HIFs' CODD/NOOD) selectivity.

Subcellular Location	Cytoplasm. Nucleus. Note: Mainly cytoplasmic. Shuttles between the nucleus and cytoplasm (PubMed:19631610). Nuclear export requires functional XPO1.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

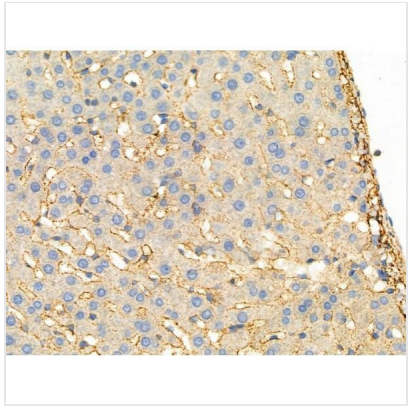
IMAGES



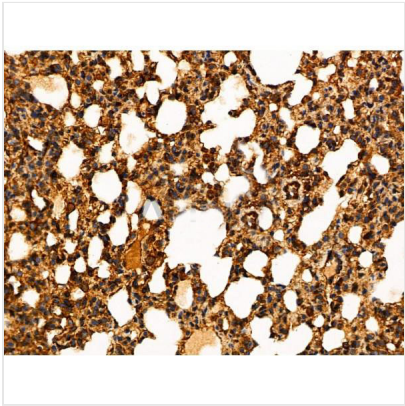
IHC (Immunohistochemistry)
At 1/100 staining Mouse colorectal tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



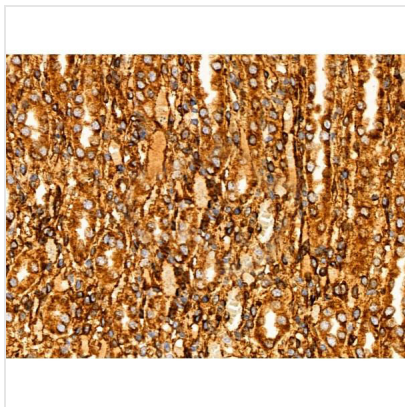
IHC (Immunohistochemistry)
At 1/100 staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)
At 1/100 staining Rat liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
Staining Rat lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Rat kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PHD2 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 HIF1B. 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. EGLN1 is the most important isozyme under normoxia and, through regulating the stability of HIF1, involved in various hypoxia-influenced processes such as angiogenesis in retinal and cardiac functionality. Target proteins are preferentially recognized via a LXXLAP motif.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	32129514
NCBI GeneID	54583
UniProt Accession #	Q9GZT9; Q8N3M8; Q9BZS8; Q9BZT0
Molecular Weight	426
NCBI Official Full Name	Egl nine homolog 1
NCBI Official Synonym Full Names	egl-9 family hypoxia-inducible factor 1
NCBI Official Symbol	EGLN1
NCBI Official Synonym Symbols	HPH2; PHD2; SM20; ECTY3; HALAH; HPH-2; HIFPH2; ZMYND6; C1orf12; HIF-PH2
NCBI Protein Information	egl nine homolog 1; egl nine-like protein 1; HIF prolyl hydroxylase 2; HIF-prolyl hydroxylase 2; zinc finger MYND domain-containing protein 6; hypoxia-inducible factor prolyl hydroxylase 2; prolyl hydroxylase domain-containing protein 2
UniProt Protein Name	Egl nine homolog 1
UniProt Gene Name	EGLN1
UniProt Synonym Gene Names	HIF-PH2; HIF-prolyl hydroxylase 2; HPH-2; PHD2
UniProt Entry Name	EGLN1_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.

