

Summary

Production Name	PHD3 Rabbit Monoclonal Antibody
Description	Recombinant Rabbit Monoclonal antibody
Host	Rabbit
Application	WB,IHC-P,IP
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal Antibody
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Purification	Affinity Purified

Immunogen

Gene Name	EGLN3
Alternative Names	PHD3; HIFPH3; HIFP4H3
Gene ID	112399
SwissProt ID	Q9H6Z9

Application

Dilution Ratio	WB: 1/500-1/1000 IHC: 1/50-1/100 IP: 1/20
Molecular Weight	Calculated MW: 27 kDa; Observed MW: 27 kDa

Background

Product Name: PHD3 Rabbit Monoclonal Antibody
Catalog #: AMRe02434

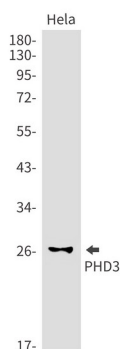


Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) 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.

Research Area

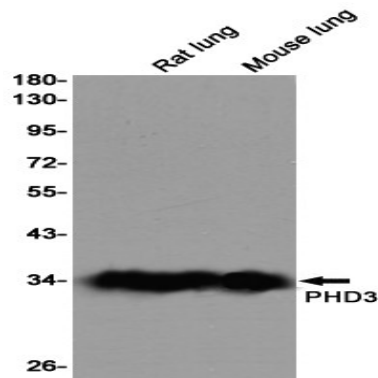
Cardiovascular

Image Data

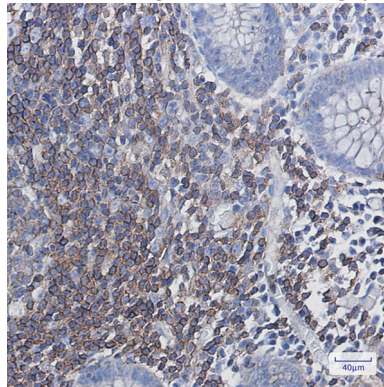


Western blot analysis of PHD3 in HeLa lysates using PHD3 antibody.

Product Name: PHD3 Rabbit Monoclonal Antibody
Catalog #: AMRe02434



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



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.

Note

For research use only.