产品名称：PHD3 Rabbit Monoclonal Antibody
产品货号：AMRe02434

产品概述（Summary）

产品名称（Production Name）	PHD3 Rabbit Monoclonal Antibody
描述（Description）	Recombinant rabbit monoclonal antibody
宿主（Host）	Rabbit
应用（Application）	WB,IHC,IP
种属反应性（Reactivity）	Human,Mouse,Rat

产品性能（Performance）

偶联物（Conjugation）	Unconjugated
修饰（Modification）	Unmodified
同种型（Isotype）	IgG
克隆（Clonality）	Monoclonal
形式（Form）	Liquid
存放说明（Storage）	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液（Buffer）	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% protective protein
纯化方式（Purification）	Affinity Purification

免疫原信息（Immunogen）

基因名（Gene Name）	EGLN3
别名（Alternative Names）	PHD3; HIFPH3; HIFP4H3
基因 ID（Gene ID）	112399
蛋白 ID（SwissProt ID）	Q9H6Z9.

产品应用（Application）

稀释比（Dilution Ratio）	WB 1:500-1:1000,IHC 1:50-1:100,IP 1:20-1:50
蛋白分子量（Molecular Weight）	Calculated MW: 27 kDa; Observed MW: 27 kDa

研究背景（Background）

Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in

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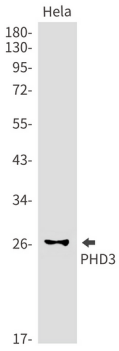
hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A. Also hydroxylates HIF2A. Has a preference for the CODD site for both HIF1A and HIF2A. Hydroxylation on the 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 hypoxy-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.

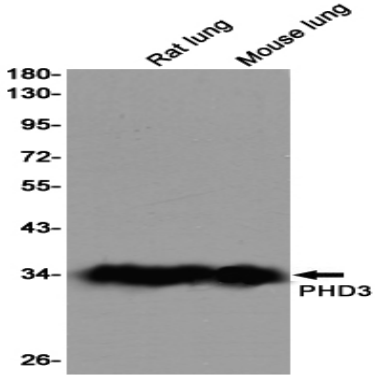
研究领域（Research Area）

Cardiovascular

图片（Image Data）



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



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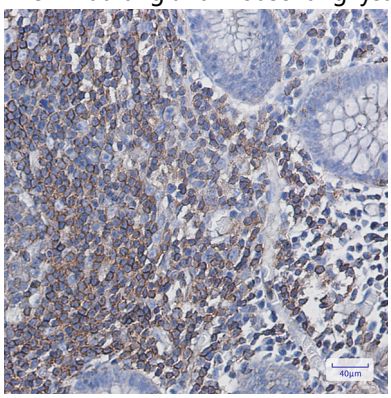
Western blot analysis of PHD3 in rat lung and mouse lung lysates using PHD3 antibody.



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.

注意事项（Note）

For research use only .