

Anti-PHD2 / prolyl hydroxylase Monoclonal Antibody

Catalog # ABO14443

Product Information

Application	WB, IP
Primary Accession	Q9GZT9
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-PHD2 / prolyl hydroxylase Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human.

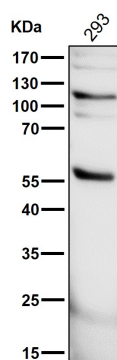
Additional Information

Gene ID	54583
Other Names	Egl nine homolog 1, 1.14.11.29, Hypoxia-inducible factor prolyl hydroxylase 2, HIF-PH2, HIF-prolyl hydroxylase 2, HPH-2, Prolyl hydroxylase domain-containing protein 2, PHD2, SM-20, EGLN1 (HGNC:1232), C1orf12
Calculated MW	46021
Application Details	WB 1:500-1:2000 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ACEF-5
Immunogen	A synthesized peptide derived from human PHD2 / prolyl hydroxylase Catalyzes the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates HIF-1 alpha at 'Pro-402' and 'Pro-564', and HIF-2 alpha. Functions as a cellular oxygen sensor and, under normoxic conditions, targets HIF through the hydroxylation for proteasomal degradation via the von Hippel-Lindau ubiquitination complex.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

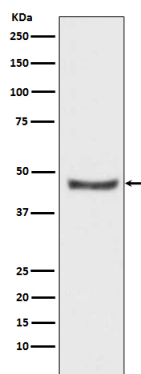
Name	EGLN1 (HGNC:1232)
Synonyms	C1orf12
Function	Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) 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.
Cellular Location	Cytoplasm. Nucleus. Note=Mainly cytoplasmic. Shuttles between the nucleus and cytoplasm (PubMed:19631610). Nuclear export requires functional XPO1.
Tissue Location	According to PubMed:11056053, 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 PubMed:12351678 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 PubMed:12788921; 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.

Images



All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.

Western blot analysis of PHD2 / prolyl hydroxylase expression in SH-SY5Y cell lysate.



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