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EGLN1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18620b

Specification

EGLN1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q9GZT9
Other Accession	NP_071334.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**46021**
Antigen Region	**396-425**

EGLN1 Antibody (C-term) - Additional Information

Gene ID 54583

Other Names
Egl nine homolog 1, 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

Target/Specificity
This EGLN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 396-425 amino acids from the C-terminal region of human EGLN1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
EGLN1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

EGLN1 Antibody (C-term) - 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 hypoxy- 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.

EGLN1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

EGLN1 Antibody (C-term) - Images

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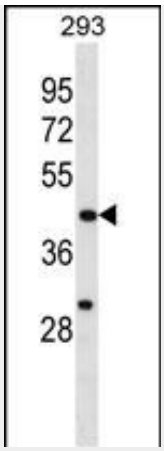

EGLN1 Antibody (C-term) (Cat. #AP18620b) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the EGLN1 antibody detected the EGLN1 protein (arrow).

EGLN1 Antibody (C-term) - Background

The protein encoded by this gene catalyzes the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. HIF is a transcriptional complex that plays a central role in mammalian oxygen homeostasis. This protein functions as a cellular oxygen sensor, and under normal oxygen concentration, modification by prolyl hydroxylation is a key regulatory event that targets HIF subunits for proteasomal destruction via the von Hippel-Lindau ubiquitylation complex. Mutations in this gene are associated with erythrocytosis familial type 3 (ECYT3).

EGLN1 Antibody (C-term) - References

Aggarwal, S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(44):18961-18966(2010)
Vogel, S., et al. J. Biol. Chem. 285(44):33756-33763(2010)
Simonson, T.S., et al. Science 329(5987):72-75(2010)
Thoms, B.L., et al. J. Biol. Chem. 285(27):20472-20480(2010)
Spinella, F., et al. PLoS ONE 5 (6), E11241 (2010) :