

EGLN2 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8703C**Specification**

EGLN2 Antibody (Center) - Product Information

Application	FC, IHC-P, WB,E
Primary Accession	O96KS0
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	43650
Antigen Region	194-221

EGLN2 Antibody (Center) - Additional Information**Gene ID** 112398**Other Names**

Egl nine homolog 2, Estrogen-induced tag 6, HPH-3, Hypoxia-inducible factor prolyl hydroxylase 1, HIF-PH1, HIF-prolyl hydroxylase 1, HPH-1, Prolyl hydroxylase domain-containing protein 1, PHD1, EGLN2, EIT6

Target/Specificity

This EGLN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 194-221 amino acids from the Central region of human EGLN2.

Dilution

FC~~1:10~50

IHC-P~~1:50~100

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

EGLN2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

EGLN2 Antibody (Center) - Protein Information

Name EGLN2 ([HGNC:14660](#))

Function Prolyl hydroxylase that mediates hydroxylation of proline residues in target proteins, such as ATF4, IKBKB, CEP192 and HIF1A (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#), PubMed:[16509823](#), PubMed:[17114296](#), PubMed:[23932902](#)). Target proteins are preferentially recognized via a LXXLAP motif (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). Cellular oxygen sensor that catalyzes, under normoxic conditions, the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[12181324](#), PubMed:[15925519](#), PubMed:[19339211](#)). Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[12181324](#), PubMed:[15925519](#)). Also hydroxylates HIF2A (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). Has a preference for the CODD site for both HIF1A and HIF2A (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). Hydroxylated HIFs are then targeted for proteasomal degradation via the von Hippel-Lindau ubiquitination complex (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). 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 (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). EGLN2 is involved in regulating hypoxia tolerance and apoptosis in cardiac and skeletal muscle (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). Also regulates susceptibility to normoxic oxidative neuronal death (PubMed:[11595184](#), PubMed:[12039559](#), PubMed:[15925519](#)). Links oxygen sensing to cell cycle and primary cilia formation by hydroxylating the critical centrosome component CEP192 which promotes its ubiquitination and subsequent proteasomal degradation (PubMed:[23932902](#)). Hydroxylates IKBKB, mediating NF-kappa-B activation in hypoxic conditions (PubMed:[17114296](#)). Also mediates hydroxylation of ATF4, leading to decreased protein stability of ATF4 (By similarity).

Cellular Location

Nucleus

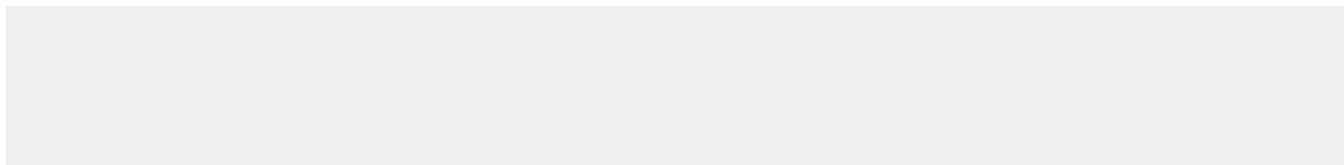
Tissue Location

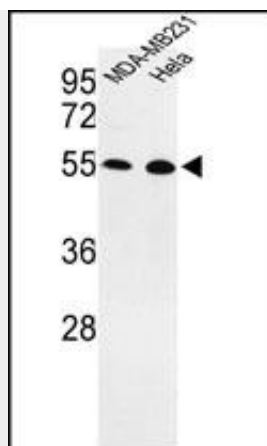
Expressed in adult and fetal heart, brain, liver, lung, skeletal muscle, and kidney. Also expressed in testis and placenta. Highest levels in adult brain, placenta, lung, kidney, and testis. Expressed in hormone responsive tissues, including normal and cancerous mammary, ovarian and prostate epithelium

EGLN2 Antibody (Center) - Protocols

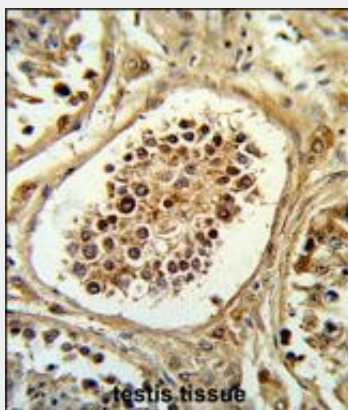
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

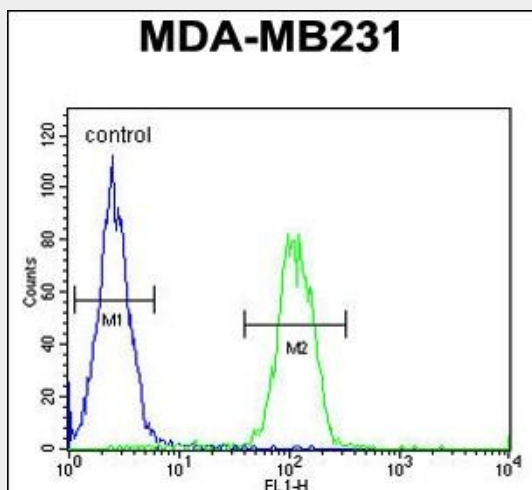
EGLN2 Antibody (Center) - Images



Western blot analysis of EGLN2 Antibody (Center) (Cat. #AP8703c) in MDA-MB231, Hela cell line lysates (35ug/lane). EGLN2 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human testis tissue reacted with EGLN2 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



EGLN2 Antibody (Center) (Cat. #AP8703c) flow cytometric analysis of MDA-MB231 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

EGLN2 Antibody (Center) - Background

EGLN2 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. It 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. It may play a role in cell growth regulation.

EGLN2 Antibody (Center) - References

Semenza,G.L. et.al., Cell 107 (1), 1-3 (2001) Aprelikova,O., et.al., Cancer Res. 69 (2), 616-624 (2009)