

## Rabbit EGLN1 Polyclonal Antibody | anti-EGLN1 antibody

EGLN1 Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                              |
|-----------|--------|-------------------|-------------------------------------------|
| AAA326064 | Rabbit | Human, Mouse, Rat | ELISA, Immunohistochemistry, Western Blot |

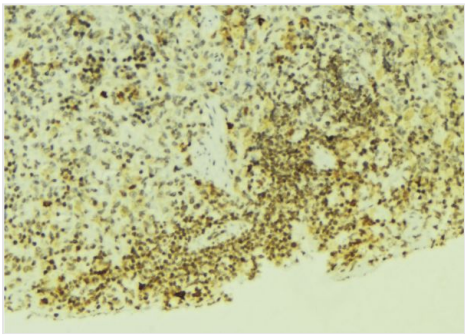
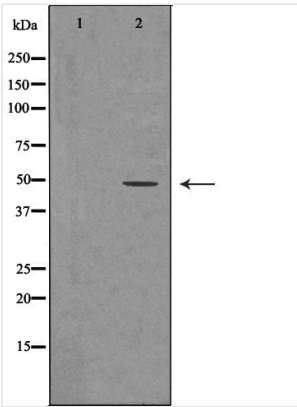
### PRODUCT SYNONYMS

EGLN1; Polyclonal Antibody; EGLN1 Antibody; C1ORF12; Chromosome 1 Open Reading Frame 12; DKFzp761F179; ECYT 3; ECYT3; EGL 9 homolog of C. elegans 1; EGL nine (C.elegans) homolog 1; Egl nine homolog 1 (C. elegans); Egl nine homolog 1; Egl nine like protein 1; EGLN 1; EglN1; EGLN1\_HUMAN; HIF PH2; HIF Prolyl Hydroxylase 2; HIF-PH2; HIF-prolyl hydroxylase 2; HIFP4H 2; HIFPH2; HPH 2; HPH-2; HPH2; Hypoxia inducible factor prolyl hydroxylase 2; Hypoxia-inducible factor prolyl hydroxylase 2; ORF13; P4H2; PHD 2; PhD2; PNAS 118; PNAS 137; Prolyl Hydroxylase Domain Containing Protein 2; Prolyl hydroxylase domain-containing protein 2; Rat Homolog of SM20; SM 20; SM-20; SM20; Zinc finger MYND domain containing protein 6; ZMYND6; anti-EGLN1 antibody

### PRODUCT SPECIFICATIONS

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                            | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Reactivity                                      | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Clonality                                       | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Isotype                                         | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specificity                                     | EGLN1 antibody detects endogenous levels of total EGLN1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Purity/Purification                             | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Form/Format                                     | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Concentration                                   | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Sequence Length                                 | 426                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Applicable Applications for anti-EGLN1 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Immunogen                                       | A synthesized peptide derived from human EGLN1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Subcellular Location                            | Nucleus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tissue Specificity                              | 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. |
| Predicted Cross Reactivity                      | <b>Pig, Bovine, Horse, Sheep, Rabbit, Dog</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Similarity                                      | Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Conjugation                                     | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Preparation and Storage                         | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

IMAGES



**IHC (Immunohistochemistry)**  
AAA326064 at 1/100 staining Mouse pancreas tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

**WB (Western Blot)**  
Western blot analysis of Hela whole cell lysates, using EGLN1 Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-EGLN1 antibody

Description: PHD1 (Egln2), PHD-2 (Egln1), and PHD3 (Egln3) are members of the Egln family of proline hydroxylases. They function as oxygen sensors that catalyze the hydroxylation of HIF on prolines 564 and 402, initiating the first step of HIF degradation through the VHL/ubiquitin pathway (1, 2). PHD1 is highly expressed in a wide array of tissues whereas PHD2 and PHD3 are expressed mainly in heart and skeletal muscle (1, 3). The mRNA levels of PHD are upregulated by HIF through the hypoxia-response element under low oxygen conditions (4-7). These three enzymes also exhibit different peptide specificity target proteins, PHD1 and PHD2 can hydroxylate both proline 402 and proline 564, but PHD3 can only hydroxylate proline 564 (2, 8). In addition to HIF, PHD enzymes have also has been shown to catalyze the hydroxylation of RNA polymerase subunits and myogenin (3, 9).

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.

Subunit Structure: Monomer. Interacts with ING4; the interaction inhibits the hydroxylation of HIF alpha proteins. Interacts with PTGES3 (via PXLE motif); thereby recruiting EGLN1 to the HSP90 pathway to facilitate HIF alpha proteins hydroxylation. Interacts with LIMD1. Found in a complex composed of LIMD1, VHL, EGLN1/PHD2, ELOB and CUL2. Interacts with EPAS1. Interacts with CBFA2T3 (PubMed:25974097). Interacts with HIF1A (PubMed:25974097).

Post-translational Modifications: S-nitrosylation inhibits the enzyme activity up to 60% under aerobic conditions. Chelation of Fe2+ has no effect on the S-nitrosylation. It is uncertain whether nitrosylation occurs on Cys-323 or Cys-326.

Similarity: The beta2beta3 'finger-like' loop domain is important for substrate (HIFs' CODD/NODD) selectivity.

NCBI AND UNIPROT INFORMATION

|                           |                                |
|---------------------------|--------------------------------|
| NCBI GI #                 | 13489073                       |
| NCBI GeneID               | 54583                          |
| NCBI Accession #          | NP_071334.1                    |
| NCBI GenBank Nucleotide # | NM_022051.2                    |
| UniProt Accession #       | Q9GZT9; Q8N3M8; Q9BZS8; Q9BZT0 |

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| Molecular Weight                 | Observed: 46 kDa<br>Predicted: 47 kDa                                   |
| NCBI Official Full Name          | egl nine homolog 1                                                      |
| NCBI Official Synonym Full Names | egl-9 family hypoxia inducible factor 1                                 |
| NCBI Official Symbol             | EGLN1                                                                   |
| NCBI Official Synonym Symbols    | HPH2; PHD2; SM20; ECTY3; HALAH; HPH-2; HIFPH2; ZMYND6; C1orf12; HIF-PH2 |
| NCBI Protein Information         | egl nine homolog 1                                                      |
| UniProt Protein Name             | Egl nine homolog 1                                                      |
| UniProt Gene Name                | <b>EGLN1</b>                                                            |
| UniProt Synonym Gene Names       | HIF-PH2; HIF-prolyl hydroxylase 2; HPH-2; PHD2                          |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)  
Online datasheet: <https://stage.aaabiotech.com/polyclonal/egln1-antibody-immunohistochemistry-western-blot-elisa/326064>