

## ARG43685 anti-EGLN3 / PHD3 antibody

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes EGLN3 / PHD3
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	EGLN3 / PHD3
Species	Human
Immunogen	Synthetic peptide corresponding to Human EGLN3 / PHD3.
Conjugation	Un-conjugated
Alternate Names	HPH-3; HPH-1; Egl nine homolog 3; HIF-prolyl hydroxylase 3; EC 1.14.11.29; HIF-PH3; Prolyl hydroxylase domain-containing protein 3; PHD3; HIFPH3; HIFP4H3; Hypoxia-inducible factor prolyl hydroxylase 3

### Application Instructions

Application table	Application	Dilution
	IHC-P	1:50 - 1:100
	IP	1:10 - 1:25
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~27-32 kDa	

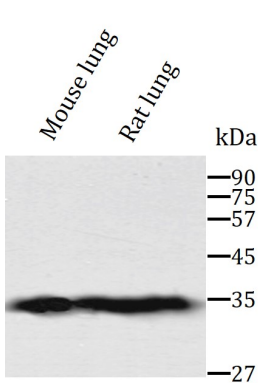
### Properties

Form	Liquid
Purification	Affinity purified.
Buffer	50 mM Tris-Glycine (pH 7.4), 150 mM NaCl, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA
Concentration	Batch dependent
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

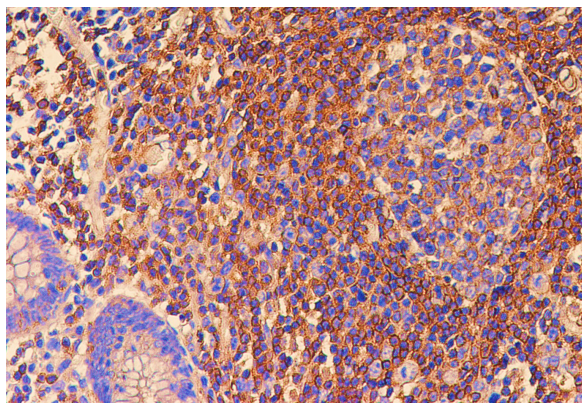
Gene Symbol	EGLN3
Gene Full Name	egl-9 family hypoxia-inducible factor 3
Background	Enables peptidyl-proline 4-dioxygenase activity. Involved in several processes, including activation of cysteine-type endopeptidase activity involved in apoptotic process; peptidyl-proline hydroxylation to 4-hydroxy-L-proline; and response to hypoxia. Located in cytosol and nucleus. Implicated in renal cell carcinoma. Biomarker of clear cell renal cell carcinoma. [provided by Alliance of Genome Resources, Apr 2022]
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 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 hypoxia-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. [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody; Metabolism antibody
Calculated Mw	27 kDa
PTM	Ubl conjugation
Cellular Localization	Cytoplasm; Nucleus

Images



ARG43685 anti-EGLN3 / PHD3 antibody WB image

Western blot: Mouse lung and Rat lung stained with ARG43685 anti-EGLN3 / PHD3 antibody at 1:1000 dilution.



ARG43685 anti-EGLN3 / PHD3 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human colon cancer stained with ARG43685 anti-EGLN3 / PHD3 antibody.