Anti-PHD2 Antibody

R1510-40

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 46kDa

Description: Prolyl hydroxylase domain proteins HIF PHD1, HIF PHD2 and HIF PHD3 (known as PHD1, PHD2 and PHD3 in rodents, respectively) can hydroxylate HIF-α subunits. Hypoxia-inducible factor (HIF) is a transcriptional regulator important in several aspects of oxygen homeostasis. The prolyl hydroxylases catalyze the posttranslational formation of 4-hydroxyproline in HIF-α proteins. HIF PHD1, which is widely expressed, with highest levels of expression in testis, functions as a cellular oxygen sensor and is important in cell growth regulation. HIF PHD1 can localize to the nucleus or the cytoplasm and is also detected in hormone responsive tissues, such as normal and cancerous mammary, ovarian and prostate epithelium. HIF PHD1 is encoded by EGLN2, which maps to chromosome 19q13.3. HIF PHD2 is regarded as the main cellular oxygen sensor, as RNA interference against HIF PHD2, but not HIF PHD1 or HIF PHD3, is enough to stabilize HIF-1α in normoxia. HIF PHD2, a direct HIF target gene, is expressed mainly in skeletal muscle, heart, kidney and brain.

Immunogen: Synthetic peptide within Human PHD2 aa 377-426 / 426.

Positive control: PC-12, human kidney tissue, mouse kidney tissue, human pancreas tissue, mouse brain tissue.

Subcellular location: Cytoplasm, Nucleus

Database links: SwissProt: Q9GZT9 Human | Q91YE3 Mouse | P59722 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:50-1:200
IHC-P	1:50-1:200
FC	1:10-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

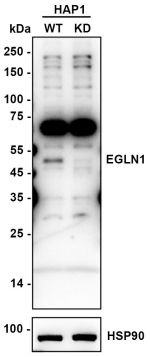

Fig1: Western blot analysis of PHD2 on different lysates with Rabbit anti-PHD2 antibody (R1510-40) at 1/1,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-PHD2 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 46 kDa
Observed band size: 46 kDa

Exposure time: 46 seconds; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (R1510-40) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

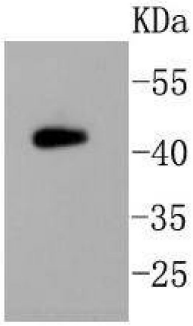

Fig2: Western blot analysis on mouse brain lysates using anti-PHD2 rabbit polyclonal antibody.

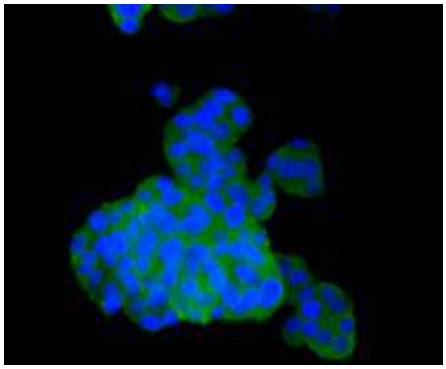

Fig3: Immunocytochemical staining of PC-12 cells using anti-PHD2 rabbit polyclonal antibody.

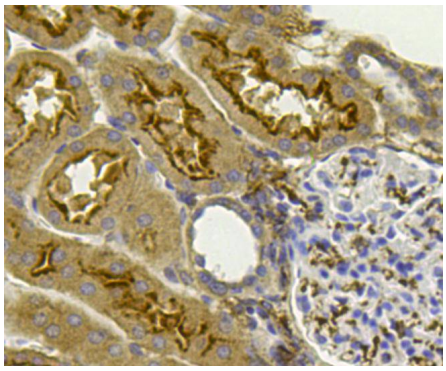

Fig4: Immunohistochemical analysis of paraffin- embedded human kidney tissue using anti-PHD2 rabbit polyclonal antibody.

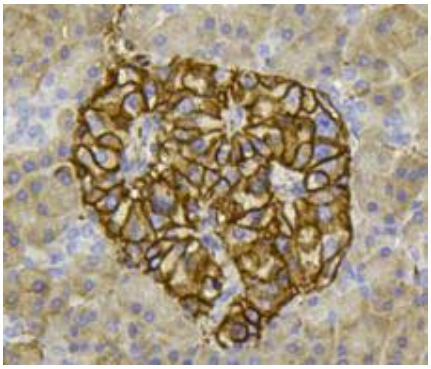

Fig5: Immunohistochemical analysis of paraffin- embedded human pancreas tissue using anti-PHD2 rabbit polyclonal antibody.

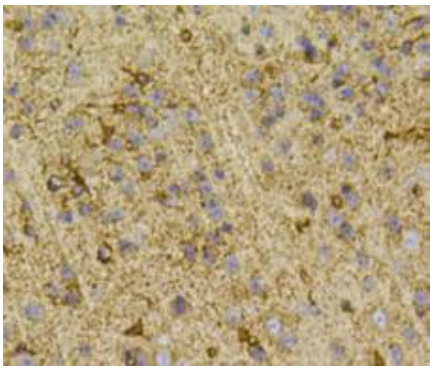

Fig6: Immunohistochemical analysis of paraffin- embedded mouse brain tissue using anti-PHD2 rabbit polyclonal antibody.

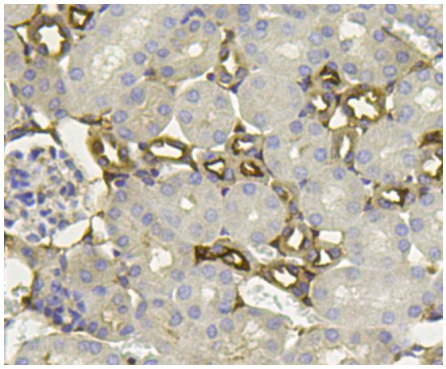

Fig7: Immunohistochemical analysis of paraffin- embedded mouse kidney tissue using anti-PHD2 rabbit polyclonal antibody.

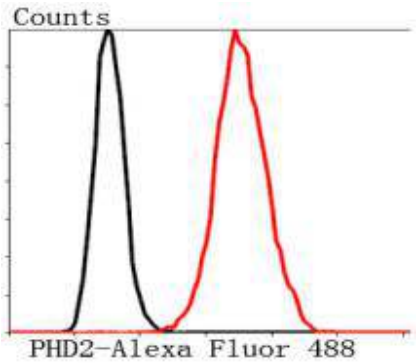

Fig8: Flow cytometric analysis of SH-SY-5Y cells with PHD2 antibody at 1/50 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Alexa Fluor 488-conjugated Goat anti rabbit IgG was used as the secondary antibody.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Song, X. et al. 2013. Wogonin inhibits tumor angiogenesis via degradation of HIF-1α protein. Toxicol. Appl. Pharmacol. 271: 144-155.
2. Yan, B. et al. 2011. Prolyl hydroxylase domain protein 3 targets Pax2 for destruction. Biochem. Biophys. Res. Commun. 409: 315-320.