

Anti-PHD2 Antibody [PSH12-74]

HA723485



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB
Molecular Wt:	Predicted band size: 46 kDa
Clone number:	PSH12-74

Description:	PHD2 (Prolyl Hydroxylase Domain-containing protein 2), also known as EGLN1, is a critical cellular oxygen sensor that plays a central role in regulating the hypoxia-inducible factor (HIF) pathway. Under normoxic conditions, PHD2 catalyzes the post-translational hydroxylation of specific proline residues (Pro-402 and Pro-564 in HIF-1 α) within the oxygen-dependent degradation (ODD) domains of HIF- α subunits (HIF-1 α and HIF-2 α). This hydroxylation marks HIF- α for proteasomal degradation via the von Hippel-Lindau (VHL) ubiquitination complex, thereby maintaining oxygen homeostasis. PHD2 is widely expressed, with the highest levels found in skeletal muscle, heart, kidney, and brain. It is the primary oxygen sensor under normoxic conditions and is essential for regulating cellular responses to oxygen availability. Under hypoxic conditions, PHD2 activity is reduced, allowing HIF- α subunits to escape degradation, translocate to the nucleus, and activate the transcription of hypoxia-inducible genes involved in angiogenesis, metabolism, and cell survival. PHD2 is encoded by the EGLN1 gene, located on chromosome 1q42.1. Mutations in EGLN1 are associated with familial erythrocytosis type 3 (ECYT3), an autosomal dominant disorder characterized by increased red blood cell mass and elevated hemoglobin levels.
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Immunogen:	Recombinant protein within human PHD2 aa 151-426.
Positive control:	293T cell lysate, HepG2 cell lysate, SH-SY5Y cell lysate, HCT 116 cell lysate.
Subcellular location:	Cytoplasm, Nucleus.
Database links:	SwissProt: Q9GZT9 Human
Recommended Dilutions:	
WB	1:2,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.
Purity:	Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Western blot analysis of PHD2 on different lysates with Rabbit anti-PHD2 antibody (HA723485) at 1/2,000 dilution.

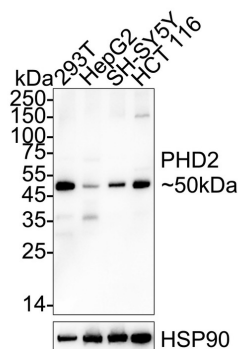
Lane 1: 293T cell lysate
Lane 2: HepG2 cell lysate
Lane 3: SH-SY5Y cell lysate
Lane 4: HCT 116 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 46 kDa
Observed band size: 50 kDa

Exposure time: 2 minutes; ECL: K1801;

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 (HA723485) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C 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 of PHD2 on different lysates with Rabbit anti-PHD2 antibody (HA723485) at 1/5,000 dilution.

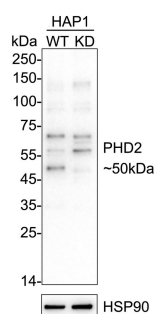
Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-PHD2 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 46 kDa
Observed band size: 50 kDa

Exposure time: 3 minutes; ECL: K1801;

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 (HA723485) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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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-1 α 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.

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