

PH-4 (N-12): sc-100090

BACKGROUND

The EF-hand domain is a twelve amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. PH-4, also known as P4HTM (prolyl 4-hydroxylase, transmembrane), PHD4 or EGLN4, is a 502 amino acid single-pass type II membrane protein that localizes to the endoplasmic reticulum and contains one PKHD domain and two EF-hand domains. Expressed in a variety of tissues with highest expression in heart, brain, kidney, placenta and skeletal muscle, PH-4 uses iron as a cofactor to catalyze the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) α proteins, thereby playing an important role in hypoxia adaptation and cellular oxygen sensing. Multiple isoforms of PH-4 exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: P4HTM (human) mapping to 3p21.31.

SOURCE

PH-4 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PH-4 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100090 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PH-4 (N-12) is recommended for detection of PH-4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PH-4 siRNA (h): sc-78320, PH-4 shRNA Plasmid (h): sc-78320-SH and PH-4 shRNA (h) Lentiviral Particles: sc-78320-V.

Molecular Weight of PH-4: 57 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.