

# PHYHD1 (N-12): sc-137669

## BACKGROUND

PHYHD1 (phytanoyl-CoA dioxygenase domain containing 1) is a 291 amino acid protein belonging to the PHYH family and the PHYHD1 subfamily. Encoded by a gene that maps to human chromosome 9q34.11, PHYHD1 exists as three alternatively spliced isoforms and likely functions as an  $\alpha$ -ketoglutarate-dependent dioxygenase. PHYHD1 participates in metal ion binding and oxidoreductase activity, thereby acting on single donors with incorporation of two atoms of oxygen. Related to PHYH (phytanoyl-CoA 2-hydroxylase), an Fe(II) and 2-oxoglutarate (2OG)-dependent oxygenase that catalyzes the initial  $\alpha$ -oxidation step in the degradation of phytanic acid in peroxisomes, PHYHD1 similarly exhibits additional homologues in a wide range of metazoans and bacteria. PHYHD1 also may play a role in DNA methylation in early postnatal liver development and mammalian differentiation.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PHYHD1 (human) mapping to 9q34.11.

## SOURCE

PHYHD1 (N-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of PHYHD1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137669 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PHYHD1 (N-12) is recommended for detection of PHYHD1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PHYHD1 (N-12) is also recommended for detection of PHYHD1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PHYHD1 siRNA (h): sc-92509, PHYHD1 shRNA Plasmid (h): sc-92509-SH and PHYHD1 shRNA (h) Lentiviral Particles: sc-92509-V.

Molecular Weight of PHYHD1 isoform 1: 32 kDa.

Molecular Weight of PHYHD1 isoform 2: 30 kDa.

Molecular Weight of PHYHD1 isoform 3: 33 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.