

PHYHIP (H-21): sc-133911

BACKGROUND

PHYHIP (phytanoyl-CoA hydroxylase-interacting protein) is a 330 amino acid protein that is strongly expressed in brain, with weak expression in ovary, small intestine and ovary. In transgenic mice, overexpression of PHYHIP in heart results in tachycardia and tachyarrhythmia. PHYHIP interacts with the Refsum disease gene product, PAHX, indicating that PHYHIP may play a role in the CNS deficits of Refsum disease, which is characterized by cerebellar degeneration, neurologic damage and peripheral neuropathies. PHYHIP also interacts with Dyrk1A, a protein that is overexpressed in brain of Down syndrome patients, therefore PHYHIP may participate in some of the neurological abnormalities of Down syndrome. Significantly, the gene encoding PHYHIP is localized to a region of the short arm of human chromosome 8 that is frequently found deleted in prostate, breast and several other types of cancers.

REFERENCES

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- Lee, Z.H., et al. 2000. Identification of a brain specific protein that associates with a Refsum disease gene product, phytanoyl-CoA α -hydroxylase. *Brain Res. Mol. Brain Res.* 75: 237-247.
- Koh, J.T., et al. 2001. Characterization of mouse brain-specific angiogenesis inhibitor 1 (BAI1) and phytanoyl-CoA α -hydroxylase-associated protein 1, a novel BAI1-binding protein. *Brain Res. Mol. Brain Res.* 87: 223-237.
- Ahn, K.Y., et al. 2002. Postnatal expression and distribution of Refsum disease gene associated protein in the rat retina and visual cortex: effect of binocular visual deprivation. *Int. J. Dev. Neurosci.* 20: 93-102.
- Koh, J.T., et al. 2004. Changes underlying arrhythmia in the transgenic heart overexpressing Refsum disease gene-associated protein. *Biochem. Biophys. Res. Commun.* 313: 156-162.
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CHROMOSOMAL LOCATION

Genetic locus: PHYHIP (human) mapping to 8p21.3; Phyhip (mouse) mapping to 14 D2.

SOURCE

PHYHIP (H-21) is an affinity purified rabbit polyclonal antibody raised against synthetic PHYHIP peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

PHYHIP (H-21) is recommended for detection of PHYHIP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PHYHIP siRNA (h): sc-77550, PHYHIP siRNA (m): sc-152240, PHYHIP shRNA Plasmid (h): sc-77550-SH, PHYHIP shRNA Plasmid (m): sc-152240-SH, PHYHIP shRNA (h) Lentiviral Particles: sc-77550-V and PHYHIP shRNA (m) Lentiviral Particles: sc-152240-V.

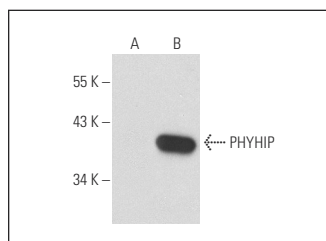
Molecular Weight of PHYHIP: 38 kDa.

Positive Controls: PHYHIP (m): 293T Lysate: sc-122550.

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).

DATA



PHYHIP (H-21): sc-133911. Western blot analysis of PHYHIP expression in non-transfected: sc-117752 (A) and mouse PHYHIP transfected: sc-122550 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Gubern, C., et al. 2013. miRNA expression is modulated over time after focal ischaemia: up-regulation of miR-347 promotes neuronal apoptosis. *FEBS J.* 280: 6233-6246.

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.