

PHIP (H-302): sc-68354

BACKGROUND

PHIP (pleckstrin homology domain interacting protein), also known as ndrp or WDR11, is a 1,821 amino acid protein that contains 8 N-terminal WD40 repeats and 2 bromodomains. It is expressed in skeletal muscle (localizing to the cytosol and nucleus) and primary β cells (localizing to the nucleus) and acts as a transcriptional activator. PHIP is known to interact with various members of the Insulin receptor substrate (IRS) family. The IRS family of proteins mediate Insulin receptor signaling and play an important role in Insulin-producing β cell proliferation and survival. PHIP specifically associates with the PH domain of IRS-1 and may function to link IRS-1 to Insulin receptors, indicating a vital role of PHIP in the regulation of Insulin signaling. Further supporting this role of PHIP, mutations in the gene encoding PHIP disrupt IRS-mediated signaling pathways resulting in the inhibition of Glut4 translocation in muscle cells. PHIP is also known to bind IRS-2 and may play a similar role linking IRS-2 to Insulin receptors.

REFERENCES

1. Farhang-Fallah, J., Yin, X., Trentin, G., Cheng, A.M. and Rozakis-Adcock, M. 2000. Cloning and characterization of PHIP, a novel Insulin receptor substrate-1 pleckstrin homology domain interacting protein. *J. Biol. Chem.* 275: 40492-40497.
2. Farhang-Fallah, J., Randhawa, V.K., Nimnual, A., Klip, A., Bar-Sagi, D. and Rozakis-Adcock, M. 2002. The pleckstrin homology (PH) domain-interacting protein couples the Insulin receptor substrate 1 PH domain to Insulin signaling pathways leading to mitogenesis and Glut4 translocation. *Mol. Cell. Biol.* 22: 7325-7336.
3. Sadagurski, M., Weingarten, G., Rhodes, C.J., White, M.F. and Wertheimer, E. 2005. Insulin receptor substrate 2 plays diverse cell-specific roles in the regulation of glucose transport. *J. Biol. Chem.* 280: 14536-14544.
4. Podcheko, A., Northcott, P., Bikopoulos, G., Lee, A., Bommarreddi, S.R., Kushner, J.A., Farhang-Fallah, J. and Rozakis-Adcock, M. 2007. Identification of a WD40 repeat-containing isoform of PHIP as a novel regulator of β -cell growth and survival. *Mol. Cell. Biol.* 27: 6484-6496.

CHROMOSOMAL LOCATION

Genetic locus: PHIP (human) mapping to 6q14.1; Phip (mouse) mapping to 9 E2.

SOURCE

PHIP (H-302) is a rabbit polyclonal antibody raised against amino acids 1470-1771 mapping near the C-terminus of PHIP of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

PHIP (H-302) is recommended for detection of PHIP of human and, to a lesser extent, mouse and rat 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)], 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).

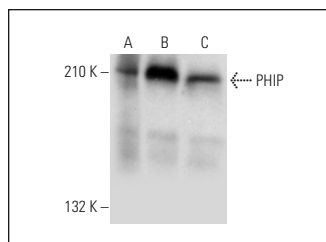
PHIP (H-302) is also recommended for detection of PHIP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PHIP siRNA (h): sc-62800, PHIP siRNA (m): sc-62801, PHIP shRNA Plasmid (h): sc-62800-SH, PHIP shRNA Plasmid (m): sc-62801-SH, PHIP shRNA (h) Lentiviral Particles: sc-62800-V and PHIP shRNA (m) Lentiviral Particles: sc-62801-V.

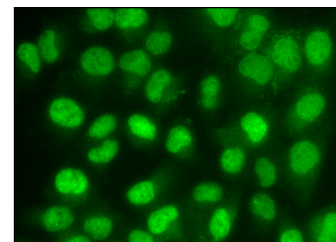
Molecular Weight of PHIP: 206 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A-375 cell lysate: sc-3811.

DATA



PHIP (H-302): sc-68354. Western blot analysis of PHIP expression in SK-MEL-28 nuclear extract (A) and HeLa (B) and A-375 (C) whole cell lysates.



PHIP (H-302): sc-68354. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

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.

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Guaranteed

Try **PHIP (B-1): sc-398614**, our highly recommended monoclonal alternative to PHIP (H-302).