

# PHIP (B-1): sc-398614

## BACKGROUND

PHIP (pleckstrin homology domain interacting protein), also known as ndrp or WDR11, is a 1,821 amino acid protein that contains eight N-terminal WD40 repeats and two bromodomains. It is expressed in skeletal muscle (localizing to the cytosol and nucleus) and primary  $\beta$  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  $\beta$  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., et al. 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., et al. 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., et al. 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., et al. 2007. Identification of a WD40 repeat-containing isoform of PHIP as a novel regulator of  $\beta$ -cell growth and survival. *Mol. Cell. Biol.* 27: 6484-6496.

## CHROMOSOMAL LOCATION

Genetic locus: PHIP (human) mapping to 6q14.1.

## SOURCE

PHIP (B-1) is a mouse monoclonal antibody raised against amino acids 1470-1771 mapping near the C-terminus of PHIP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHIP (B-1) is available conjugated to agarose (sc-398614 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398614 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398614 PE), fluorescein (sc-398614 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398614 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398614 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398614 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398614 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398614 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398614 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

PHIP (B-1) is recommended for detection of PHIP of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

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

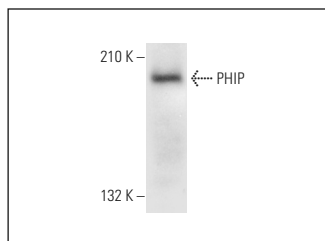
Molecular Weight of PHIP: 206 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

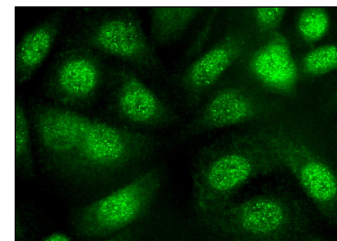
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



PHIP (B-1): sc-398614. Western blot analysis of PHIP expression in HeLa whole cell lysate.



PHIP (B-1): sc-398614. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

## 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) for detailed protocols and support products.