SANTA CRUZ BIOTECHNOLOGY, INC.

Phocein (E-6): sc-165980

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The Power to Question

BACKGROUND

Phocein (preimplantation protein 3, Mps1 binder kinase activator-like 3, 2C4D) is a 225 amino acid protein encoded by the human gene MOBKL3. Phocein belongs to the MOB1/Phocein family and is phosphorylated on serine residues. Phocein is a widely expressed, highly conserved intracellular protein. The sequence of Phocein has limited homology to the σ subunits from Clathrin adaptor complexes and contains an additional stretch bearing a putative SH3-binding domain. Phocein is usually associated with membranes but can be present in the cytosol, where it behaves as a protein complex. Phocein is the major partner of the striatin family members, which are scaffolding proteins involved in signaling and trafficking. Due to its association with Dynamin via direct interactions with nucleotide diphosphate kinase (NDPK) and Eps15, Phocein has been implicated in vesicular trafficking, acting in particular in the endocytic process.

REFERENCES

1. Baillat, G., et al. 2001. Molecular cloning and characterization of Phocein, a protein found from the Golgi complex to dendritic spines. Mol. Biol. Cell 12: 663-673.
2. Moreno, C.S., et al. 2001. A mammalian homolog of yeast MOB1 is both a member and a putative substrate of striatin family-protein phosphatase 2A complexes. J. Biol. Chem. 276: 24253-24260.
3. Baillat, G., et al. 2002. Interactions of Phocein with nucleoside-diphosphate kinase, Eps15, and Dynamin I. J. Biol. Chem. 277: 18961-18966.
4. Blondeau, C., et al. 2003. Expression and distribution of Phocein and members of the striatin family in neurones of rat peripheral ganglia. Histochem. Cell Biol. 119: 131-138.
5. Ponchon, L., et al. 2004. NMR solution structure of MOB1, a mitotic exit network protein and its interaction with an NDR kinase peptide. J. Mol. Biol. 337: 167-182.
6. Haeberlé, A.M., et al. 2006. Immunogold localization of Phocein in dendritic spines. J. Comp. Neurol. 495: 336-350.
7. Castets, F. and Bailly, Y.J. 2007. Phocein: a potential actor in vesicular trafficking at Purkinje cell dendritic spines. Cerebellum 6: 344-352.

CHROMOSOMAL LOCATION

Genetic locus: MOBKL3 (human) mapping to 2q33.1; Mobkl3 (mouse) mapping to 1 C1.2.

SOURCE

Phocein (E-6) is a mouse monoclonal antibody raised against amino acids 1-225 representing full length Phocein of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Phocein (E-6) is recommended for detection of Phocein of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Phocein (E-6) is also recommended for detection of Phocein in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Phocein siRNA (h): sc-76123, Phocein siRNA (m): sc-76124, Phocein shRNA Plasmid (h): sc-76123-SH, Phocein shRNA Plasmid (m): sc-76124-SH, Phocein shRNA (h) Lentiviral Particles: sc-76123-V and Phocein shRNA (m) Lentiviral Particles: sc-76124-V.

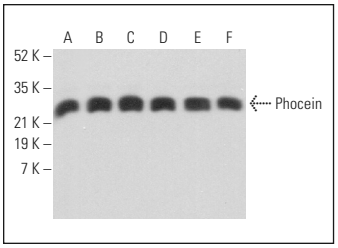
Molecular Weight of Phocein: 26 kDa.

Positive Controls: JAR cell lysate: sc-2276, NIH/3T3 whole cell lysate: sc-2210 or Phocein (m): 293T Lysate: sc-122546.

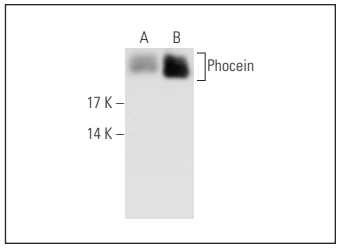
RECOMMENDED SUPPORT REAGENTS

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

DATA



Phocein (E-6): sc-165980. Western blot analysis of Phocein expression in JAR (**A**), PC-12 (**B**), PC-3 (**C**), AT3B-1 (**D**), NIH/3T3 (**E**) and F9 (**F**) whole cell lysates.



Phocein (E-6): sc-165980. Western blot analysis of Phocein expression in non-transfected: sc-117752 (**A**) and mouse Phocein transfected: sc-122546 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, M., et al. 2018. The MST4-MOB4 complex disrupts the MST1-MOB1 complex in the Hippo-YAP pathway and plays a pro-oncogenic role in pancreatic cancer. J. Biol. Chem. 293: 14455-14469.

STORAGE

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