SANTA CRUZ BIOTECHNOLOGY, INC.

POR1 (E-3): sc-271478

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

POR1 (also designated arfaptin 2) was first isolated as a Rac 1 binding protein necessary for Rac-mediated actin polymerization and the subsequent formation of membrane ruffles and lamellipodia. POR1 has also been shown to interact with the ADP ribosylation factor ARF6, a GTPase that associates with the plasma membrane and intracellular endosome vesicles, in a GTP dependent manner. The association of POR1 with ARF6 stimulates induction of Actin polymerization. POR1 appears to play a regulatory role through multiple signaling pathways in the reorganization of the cytoskeletal structure.

REFERENCES

1. Van Aelst, L., et al. 1996. Identification of a novel Rac 1-interacting protein involved in membrane ruffling. EMBO J. 15: 3778-3786.
2. Joneson, T., et al. 1996. Rac regulation of Actin polymerization and proliferation by a pathway distinct from Jun kinase. Science 274: 1374-1376.
3. D'Souza-Schorey, C., et al. 1997. A role for POR1, a Rac 1-interacting protein, in ARF6-mediated cytoskeletal rearrangements. EMBO J. 16: 5445-5454.
4. D'Souza-Schorey, C., et al. 1998. ARF6 targets recycling vesicles to the plasma membrane: insights from an ultrastructural investigation. J. Cell Biol. 140: 603-616.
5. Gauthier-Rouviere, C., et al. 1998. Rho G GTPase controls a pathway that independently activates Rac 1 and Cdc42Hs. Mol. Biol. Cell 9: 1379-1394.

CHROMOSOMAL LOCATION

Genetic locus: ARFIP2 (human) mapping to 11p15.4; Arfip2 (mouse) mapping to 7 E3.

SOURCE

POR1 (E-3) is a mouse monoclonal antibody raised against amino acids 1-100 mapping at the N-terminus of POR1 of human origin.

PRODUCT

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

POR1 (E-3) is available conjugated to agarose (sc-271478 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271478 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271478 PE), fluorescein (sc-271478 FITC), Alexa Fluor® 488 (sc-271478 AF488), Alexa Fluor® 546 (sc-271478 AF546), Alexa Fluor® 594 (sc-271478 AF594) or Alexa Fluor® 647 (sc-271478 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271478 AF680) or Alexa Fluor® 790 (sc-271478 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

POR1 (E-3) is recommended for detection of POR1 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), immunohistochemistry (including paraffin-embedded sections) (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 POR1 siRNA (h): sc-41192, POR1 siRNA (m): sc-41193, POR1 shRNA Plasmid (h): sc-41192-SH, POR1 shRNA Plasmid (m): sc-41193-SH, POR1 shRNA (h) Lentiviral Particles: sc-41192-V and POR1 shRNA (m) Lentiviral Particles: sc-41193-V.

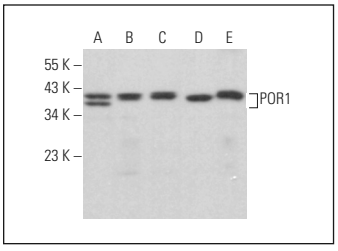
Molecular Weight of POR1: 33 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, EOC 20 whole cell lysate: sc-364187 or C6 whole cell lysate: sc-364373.

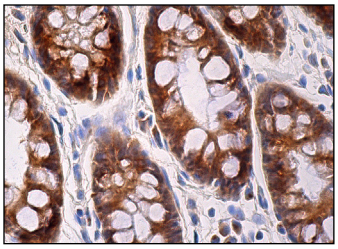
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



POR1 (E-3): sc-271478. Western blot analysis of POR1 expression in ZR-75-1 (**A**), Neuro-2A (**B**), EOC 20 (**C**) and C6 (**D**) whole cell lysates and mouse postnatal brain tissue extract (**E**).



POR1 (E-3): sc-271478. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Nguyen, T.N., et al. 2021. ATG4 family proteins drive phagophore growth independently of the LC3/GABARAP lipidation system. Mol. Cell 81: 2013-2030.e9.

RESEARCH USE

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