**BACKGROUND**

Rho, the Ras-related small GTPase, is responsible for the regulation of actin-based cytoskeletal structures including stress fibers, focal adhesions and the contractile ring apparatus. Rho proteins act as molecular switches which are able to turn cytokinesis on and off. Although little is know about signaling downstream of Rho, several proteins have been implicated as Rho effectors. Protein kinase N (PKN) is a fatty acid-activated serine/threonine kinase whose catalytic domain exhibits homology with that of the PKC family. PKN associates with Rho via its amino terminus, is activated in a GTP-dependent manner and phosphorylates the head-rod domain of neurofilament protein. A second protein, rhophilin, exhibits 40% sequence identity with the amino terminal PKN and rhophilin protein organization and little homology with the Rho binding domains of cytoskeletal components that initiate a kinase signaling cascade. Citron interacts specifically with active Rho and Rac1 but not Cdc42. Citron exhibits a distinctive protein organization and little homology with the Rho binding domains of PKN and rhophilin.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: PKN1 (human) mapping to 19p13.12; Pkn1 (mouse) mapping to 8 C2.

**SOURCE**

PKN (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 923-942 at the C-terminus of PKN of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKN (H-4) is available conjugated to agarose (sc-393344 AC); 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-393344 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393344 PE), fluorescein (sc-393344 FITC), Alexa Fluor® 488 (sc-393344 AF488), Alexa Fluor® 546 (sc-393344 AF546), Alexa Fluor® 594 (sc-393344 AF594) or Alexa Fluor® 647 (sc-393344 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393344 AF680) or Alexa Fluor® 790 (sc-393344 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393344 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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**APPLICATIONS**

PKN (H-4) is recommended for detection of PKN of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:1000-1:10000), 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).

Suitable for use as control antibody for PKN siRNA (h): sc-36261, PKN siRNA (m): sc-36262, PKN shRNA Plasmid (h): sc-36261-SH, PKN shRNA Plasmid (m): sc-36262-SH, PKN shRNA (h) Lentiviral Particles: sc-36261-V and PKN shRNA (m) Lentiviral Particles: sc-36262-V.

Molecular Weight of PKN: 120 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG 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-IgG BP-FITC: sc-516140 or m-IgG 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**

**SELECT PRODUCT CITATIONS**


**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.