RP1 (F-11): sc-390375

**BACKGROUND**

APC (adenomatous polyposis coli) is a tumor suppressor gene that is frequently mutated in colorectal cancers and is one of the earliest indicators of colorectal carcinogenesis. APC is widely expressed and is largely similar to the related brain-specific homolog APCL. These proteins both associate with β-catenin and functionally regulate the levels of intracellular β-catenin. Additionally, these homologs interact with the microtubule cytoskeletal protein EB1 to regulate cell cycle progression or growth control. EB1 family proteins (EB1, RP1 (EB2) and EB3) interact with cytoplasmic microtubules in interphase cells, with mitotic spindles, and with the APC tumor suppressor gene. The functional inactivation of the APC gene product is a key event in colorectal tumorigenesis. RP1 is localized in the plus ends of microtubule networks in the presence or absence of APC. The gene which encodes RP1 maps to human chromosome 18q12.1.

**REFERENCES**

4. Morrison, E.E., et al. 1998. EB1, a protein which interacts with the APC tumour suppressor, is associated with the microtubule cytoskeleton throughout the cell cycle. Oncogene 17: 3471-3477.

**CHROMOSOMAL LOCATION**

Genetic locus: MAPRE2 (human) mapping to 18q12.1; Mapre2 (mouse) mapping to 18 A2.

**SOURCE**

RP1 (F-11) is a mouse monoclonal antibody raised against amino acids 237-327 mapping at the C-terminus of RP1 of human origin.

**PRODUCT**

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

RP1 (F-11) is available conjugated to agarose (sc-390375 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390375 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390375 PE), fluorescein (sc-390375 FITC), Alexa Fluor® 488 (sc-390375 AF488), Alexa Fluor® 546 (sc-390375 AF546), Alexa Fluor® 594 (sc-390375 AF594) or Alexa Fluor® 647 (sc-390375 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390375 AF680) or Alexa Fluor® 790 (sc-390375 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

RP1 (F-11) is recommended for detection of RP1 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).


Molecular Weight of RP1: 35 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HEL 92.1.7 cell lysate: sc-2270 or IMR-32 cell lysate: sc-2409.

**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**

RP1 (F-11): sc-390375. Western blot analysis of RP1 expression in K-562 (A), IMR-32 (B) and HEL 92.1.7 (C) whole cell lysates.

RP1 (F-11): sc-390375. Western blot analysis of RP1 expression in WEHI-231 (A), BYDP (B) and Neuro-2A (C) whole cell lysates.

**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 for detailed protocols and support products.