**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 homologue 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 IgG; kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**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 1:30-1:300).


Molecular Weight of RP1: 35 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or PMA treated Jurkat whole cell lysate.

**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, TBS Blotto A Blocking Reagent: sc-2333 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**

**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 website at www.scbt.com for detailed protocols and support products.