SANTA CRUZ BIOTECHNOLOGY, INC.

RUNDC3A (H-9): sc-390248

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

RUNDC3A (RUN domain containing 3A), also known as RPIP-8 (Rap2-interacting protein 8) or RAP2IP, is a 446 amino acid protein that is thought to act as an effector protein of RAP2A in neuronal cells. A member of the RUNDC3 family, RUNDC3A contains one RUN domain and undergoes alternative splicing events to produce four isoforms. RUNDC3A is expressed in testis, brain, kidney and liver, and is encoded by a gene that maps to human chromosome 17q21.31. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
2. Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
3. Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. Oncogene 14: 865-871.

CHROMOSOMAL LOCATION

Genetic locus: RUNDC3A (human) mapping to 17q21.31; Rundc3a (mouse) mapping to 11 D.

SOURCE

RUNDC3A (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 145-177 within an internal region of RUNDC3A 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.

RUNDC3A (H-9) is available conjugated to agarose (sc-390248 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390248 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390248 PE), fluorescein (sc-390248 FITC), Alexa Fluor® 488 (sc-390248 AF488), Alexa Fluor® 546 (sc-390248 AF546), Alexa Fluor® 594 (sc-390248 AF594) or Alexa Fluor® 647 (sc-390248 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390248 AF680) or Alexa Fluor® 790 (sc-390248 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390248 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

RUNDC3A (H-9) is recommended for detection of RUNDC3A 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).

Suitable for use as control antibody for RUNDC3A siRNA (h): sc-93668, RUNDC3A siRNA (m): sc-153176, RUNDC3A shRNA Plasmid (h): sc-93668-SH, RUNDC3A shRNA Plasmid (m): sc-153176-SH, RUNDC3A shRNA (h) Lentiviral Particles: sc-93668-V and RUNDC3A shRNA (m) Lentiviral Particles: sc-153176-V.

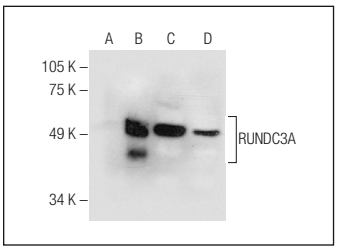
Molecular Weight of RUNDC3A isoforms: 50/45/45/41 kDa.

Positive Controls: RUNDC3A (m): 293T Lysate: sc-125953, mouse brain extract: sc-2253 or human hippocampus tissue extract.

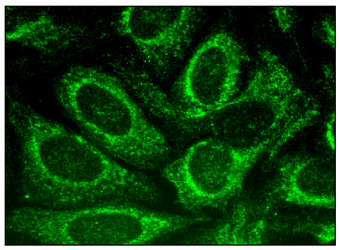
RECOMMENDED SUPPORT REAGENTS

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



RUNDC3A (H-9): sc-390248. Western blot analysis of RUNDC3A expression in non-transfected: sc-117752 (**A**) and mouse RUNDC3A transfected: sc-125953 (**B**) 293T whole cell lysates and mouse brain (**C**) and human hippocampus (**D**) tissue extracts.



RUNDC3A (H-9): sc-390248. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.