

RUNDC3A (E-2): sc-377090

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

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- 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.
- Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
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- Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.

CHROMOSOMAL LOCATION

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

SOURCE

RUNDC3A (E-2) is a mouse monoclonal antibody raised against amino acids 276-340 mapping within an internal region of RUNDC3A 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.

APPLICATIONS

RUNDC3A (E-2) 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), 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 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.

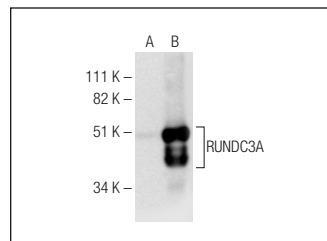
Molecular Weight of RUNDC3A isoforms: 50/45/45/41 kDa.

Positive Controls: RUNDC3A (m): 293T Lysate: sc-125953.

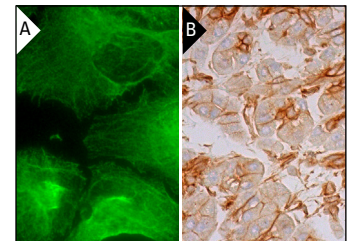
RECOMMENDED SUPPORT REAGENTS

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



RUNDC3A (E-2): sc-377090. Western blot analysis of RUNDC3A expression in non-transfected: sc-117752 (A) and mouse RUNDC3A transfected: sc-125953 (B) 293T whole cell lysates.



RUNDC3A (E-2): sc-377090. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing membrane and cytoplasmic staining of exocrine glandular cells (B).

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.