SANTA CRUZ BIOTECHNOLOGY, INC.

RPRML (S-12): sc-136845



BACKGROUND

Reprimo is a cytoplasmic protein belonging to the Reprimo family, which is involved in the regulation of p53-dependent G_2 arrest of the cell cycle. Reprimo may initiate cell cycle arrest by inhibiting Cdc2 and nuclear translocation of the Cdc2 cyclin B1 complex. A highly glycosylated protein, Reprimo also plays a role in cell cycle surveillance and DNA repair. Hypermethylation of Reprimo can lead to its transcriptional repression, which may increase pathogenesis of some types of human cancers. Reprimo has been identified as a potential biomarker for early detection multiple cancers. RPRML (reprimo-like) is a 120 amino acid single-pass membrane protein also belonging to the Reprimo family and may have functions similar to the Reprimo protein. RPRML is encoded by a gene located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

- 1. Ohki, R., et al. 2000. Reprimo, a new candidate mediator of the p53-mediated cell cycle arrest at the G_2 phase. J. Biol. Chem. 275: 22627-22630.
- Ye, Z. and Parry, J.M. 2002. Identification of polymorphisms in the human Reprimo gene using public EST data. Teratog., Carcinog. Mutagen. 22: 485-493.
- Sato, N., et al. 2003. Discovery of novel targets for aberrant methylation in pancreatic carcinoma using high-throughput microarrays. Cancer Res. 63: 3735-3742.
- 4. Takahashi, T., et al. 2005. Aberrant methylation of Reprimo in human malignancies. Int. J. Cancer. 115: 503-510.
- Sato, N., et al. 2006. Aberrant methylation of Reprimo correlates with genetic instability and predicts poor prognosis in pancreatic ductal adenocarcinoma. Cancer 107: 251-257.
- Hamilton, J.P., et al. 2006. Reprimo methylation is a potential biomarker of Barrett's-associated esophageal neoplastic progression. Clin. Cancer Res. 12: 6637-6642.
- 7. Bernal, C., et al. 2008. Reprimo as a potential biomarker for early detection in gastric cancer. Clin. Cancer Res. 14: 6264-6269.
- Malik, S., et al. 2010. Histone deacetylase 7 and FoxA1 in estrogen-mediated repression of RPRM. Mol. Cell. Biol. 30: 399-412.

CHROMOSOMAL LOCATION

Genetic locus: RPRML (human) mapping to 17q21.32; Rprml (mouse) mapping to 11 E1.

SOURCE

RPRML (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RPRML of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136845 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RPRML (S-12) is recommended for detection of RPRML of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RPRML (S-12) is also recommended for detection of RPRML in additional species, including bovine.

Suitable for use as control antibody for RPRML siRNA (h): sc-94132, RPRML siRNA (m): sc-153116, RPRML shRNA Plasmid (h): sc-94132-SH, RPRML shRNA Plasmid (m): sc-153116-SH, RPRML shRNA (h) Lentiviral Particles: sc-94132-V and RPRML shRNA (m) Lentiviral Particles: sc-153116-V.

Molecular Weight of RPRML: 12 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.