SANTA CRUZ BIOTECHNOLOGY, INC.

fzr (SPM381): sc-56381

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fizzy-related protein, known as fzr, is a conserved eukaryotic gene that has been recently identified as a 7WD domain family member and is implicated in cell cycle regulation of *Drosophila* and yeast. Retroviral overexpression of fzr in B lymphoma cells reduces tumor formation. Fzr overexpression increases B lymphoma cell susceptibility to natural killer cell (NK) cytotoxicity. Fzr has been implicated in a new category of genes which suppress B cell tumorigenesis. Current research suggests a novel role for fzr in the target cell interaction with NK cells. Fzr also negatively regulates the levels of cyclins A, B and B3. Loss of fzr causes progression through an extra division cycle in the epidermis and inhibition of endoreduplication in the salivary gland, in addition to failure of cyclin removal. Conversely, premature fzr overexpression downregulates mitotic cyclins, inhibits mitosis and transforms mitotic cycles into endoreduplication cycles.

REFERENCES

1. Sigrist, S.J. and Lehner, C.F. 1997. *Drosophila* fizzy-related downregulates mitotic cyclins and is required for cell proliferation arrest and entry into endocycles. Cell 4: 671-681.
2. Inbal, N., et al. 1999. The mammalian fizzy and fizzy-related genes are regulated at the transcriptional and post-transcriptional levels. FEBS Lett. 3: 350-354.
3. Wang, C.X., et al. 2000. Over-expression of murine fizzy-related (fzr) increases natural killer cell-mediated cell death and suppresses tumor growth. Blood 1: 259-263.
4. Yudkovsky, Y., et al. 2000. Phosphorylation of Cdc20/fizzy negatively regulates the mammalian cyclosome/APC in the mitotic checkpoint. Biochem. Biophys. Res. Commun. 2: 299-304.
5. Zur, A. and Brandeis, M. 2001. Securin degradation is mediated by fzy and fzr, and is required for complete chromatid separation but not for cytokinesis. EMBO J. 4: 792-801.

CHROMOSOMAL LOCATION

Genetic locus: FZR1 (human) mapping to 19p13.3; Fzr1 (mouse) mapping to 10 C1.

SOURCE

fzr (SPM381) is a mouse monoclonal antibody raised against recombinant fzr of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

fzr (SPM381) is recommended for detection of fzr of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for fzr siRNA (h): sc-44349, fzr siRNA (m): sc-145283, fzr shRNA Plasmid (h): sc-44349-SH, fzr shRNA Plasmid (m): sc-145283-SH, fzr shRNA (h) Lentiviral Particles: sc-44349-V and fzr shRNA (m) Lentiviral Particles: sc-145283-V.

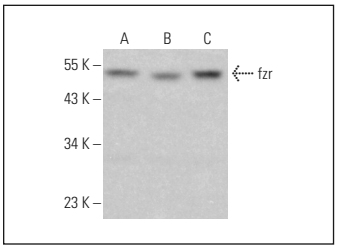
Molecular Weight of fzr: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

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).

DATA



fzr (SPM381): sc-56381. Western blot analysis of fzr expression in HeLa (**A**), Hep G2 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lim, H.J., et al. 2013. The G_2/M regulator histone demethylase PHF8 is targeted for degradation by the anaphase-promoting complex containing CDC20. Mol. Cell. Biol. 33: 4166-4180.

PROTOCOLS

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