

# fzr (B-6): sc-166714

## BACKGROUND

Fizzy-related protein, known as fzr, is a conserved eukaryotic gene that has been recently identified as a seven WD 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 posttranscriptional levels. *FEBS Lett.* 3: 350-354.
3. Wang, C.X., et al. 2000. Overexpression 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

fzr (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 55-75 near the N-terminus of fzr of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166714 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

fzr (B-6) is recommended for detection of fzr 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).

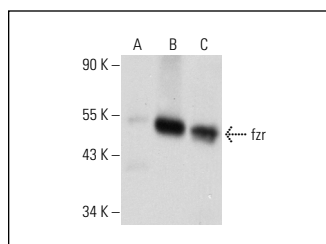
fzr (B-6) is also recommended for detection of fzr in additional species, including canine, bovine and porcine.

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, SK-N-MC cell lysate: sc-2237 or fzr (m): 293T Lysate: sc-120348.

## DATA



fzr (B-6): sc-166714. Western blot analysis of fzr expression in non-transfected 293T: sc-117752 (A), mouse fzr transfected 293T: sc-120348 (B) and HeLa (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Dutta, P., et al. 2019. The tumor suppressor FBXO31 preserves genomic integrity by regulating DNA replication and segregation through precise control of cyclin A levels. *J. Biol. Chem.* 294: 14879-14895.
2. Elbasani, E., et al. 2020. Kaposi sarcoma herpesvirus lytic replication is independent of the anaphase promoting complex activity. *J. Virol.* 94: e02079-19.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.