

FEZ1 (F-12): sc-376198

BACKGROUND

Frequent loss of heterozygosity (LOH) at human chromosome 8p21.3 is associated with various tumors including prostate and breast cancer. The 8p21.3 region contains the FEZ1 gene, which is altered in tumors of the esophagus, prostate and breast. The FEZ1 protein (also known as leucine zipper putative tumor suppressor or LZTS1) contains a DNA-binding leucine zipper motif. FEZ1 is expressed in normal breast and prostate, but alterations in FEZ1 expression result in abnormal cell growth. The absence of FEZ1 expression is characteristic of breast and prostate cancer cell lines as well as primary breast and prostate tumors. This absence of FEZ1 may be due to several factors, including mutations in the FEZ1 gene or hypermethylation of the CpG island flanking the FEZ1 promoter region. FEZ1 acts as a negative regulator of cell growth. During cell-cycle progression, FEZ1 localizes to microtubule components and is hyperphosphorylated by cAMP-dependent kinase.

REFERENCES

1. Macoska, J.A., et al. 1995. Evidence for three tumor suppressor gene loci on chromosome 8p in human prostate cancer. *Cancer Res.* 55: 5390-5395.
2. Kagan, J., et al. 1995. Homozygous deletions at 8p22 and 8p21 in prostate cancer implicate these regions as the sites for candidate tumor suppressor genes. *Oncogene* 11: 2121-2126.
3. Anbazhagan, R., et al. 1998. Allelic loss of chromosomal arm 8p in breast cancer progression. *Am. J. Pathol.* 152: 815-819.
4. Ishii, H., et al. 1999. The FEZ1 gene at chromosome 8p22 encodes a leucine-zipper protein, and its expression is altered in multiple human tumors. *Proc. Natl. Acad. Sci. USA* 96: 3928-3933.
5. Ishii, H., et al. 2001. FEZ1/LZTS1 gene at 8p22 suppresses cancer cell growth and regulates mitosis. *Proc. Natl. Acad. Sci. USA* 98: 10374-10379.
6. Vecchione, A., et al. 2001. FEZ1/LZTS1 alterations in gastric carcinoma. *Clin. Cancer Res.* 7: 1546-1552.
7. Cabeza-Arvelaiz, Y., et al. 2001. Functional identification of LZTS1 as a candidate prostate tumor suppressor gene on human chromosome 8p22. *Oncogene* 20: 4169-4179.

CHROMOSOMAL LOCATION

Genetic locus: LZTS1 (human) mapping to 8p21.3; *Lzts1* (mouse) mapping to 8 B3.3.

SOURCE

FEZ1 (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 181-219 within an internal region of FEZ1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-376198 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

FEZ1 (F-12) is recommended for detection of FEZ1 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 FEZ1 siRNA (h): sc-37410, FEZ1 siRNA (m): sc-145161, FEZ1 shRNA Plasmid (h): sc-37410-SH, FEZ1 shRNA Plasmid (m): sc-145161-SH, FEZ1 shRNA (h) Lentiviral Particles: sc-37410-V and FEZ1 shRNA (m) Lentiviral Particles: sc-145161-V.

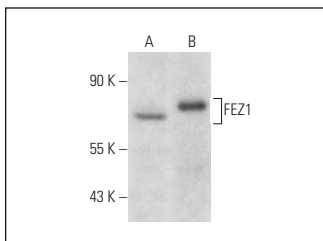
Molecular Weight of FEZ1: 67 kDa.

Positive Controls: rat brain extract: sc-2392, LNCaP cell lysate: sc-2231 or MOLT-4 cell lysate: sc-2233.

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



FEZ1 (F-12): sc-376198. Western blot analysis of FEZ1 expression in MOLT-4 whole cell lysate (A) and rat brain tissue extract (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.

PROTOCOLS

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