

FEZ1 (S-20): sc-19507

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 cell, 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.

SOURCE

FEZ1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FEZ1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-19507 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FEZ1 (S-20) is recommended for detection of FEZ1 of 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).

FEZ1 (S-20) is also recommended for detection of FEZ1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FEZ1 siRNA (h): sc-37410, FEZ1 shRNA Plasmid (h): sc-37410-SH and FEZ1 shRNA (h) Lentiviral Particles: sc-37410-V.

Molecular Weight of FEZ1: 67 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, DU 145 cell lysate: sc-2268 or MOLT-4 cell lysate: sc-2233.

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) Immunofluorescence: 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.

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 or our catalog for detailed protocols and support products.