

BFZB (I-16): sc-85298

BACKGROUND

BFZB (basic FGF-repressed Zic-binding protein), also known as UQCC (ubiquinol-cytochrome c reductase complex chaperone CBP3 homolog), is a 299 amino acid protein that localizes to vesicles of the cytoplasm. With expression in the developing nervous system, ganglia of cranial nerves V, VII, VIII, IX and X, dorsal root ganglia, developing eye, brown fat and differentiating chondrocytes, BFZB may play a role in height determination and early development. A single nucleotide polymorphism (SNP) in the gene encoding BFZB is highly correlated with a functional SNP in the neighboring GDF-5 gene, which is associated with an increased risk of osteoarthritis. The SNP in the gene encoding BFZB is also associated with increased height, explaining 0.3-0.5% of the variance in height in both males and females. There are four isoforms of BFZB which are produced as a result of alternative splicing events.

REFERENCES

- Vetter, K. and Wurst, W. 2001. Expression of a novel mouse gene "mbFZb" in distinct regions of the developing nervous system and the adult brain. *Mech. Dev.* 100: 123-125.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611797. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Imabayashi, H., et al. 2003. Redifferentiation of dedifferentiated chondrocytes and chondrogenesis of human bone marrow stromal cells via chondrosphere formation with expression profiling by large-scale cDNA analysis. *Exp. Cell Res.* 288: 35-50.
- Goldring, M.B., et al. 2006. The control of chondrogenesis. *J. Cell. Biochem.* 97: 33-44.
- Miyamoto, Y., et al. 2007. A functional polymorphism in the 5' UTR of GDF5 is associated with susceptibility to osteoarthritis. *Nat. Genet.* 39: 529-533.
- Sanna, S., et al. 2008. Common variants in the GDF5-UQCC region are associated with variation in human height. *Nat. Genet.* 40: 198-203.
- Weedon, M.N., et al. 2008. Genome-wide association analysis identifies 20 loci that influence adult height. *Nat. Genet.* 40: 575-583.

CHROMOSOMAL LOCATION

Genetic locus: UQCC (human) mapping to 20q11.22; Uqcc (mouse) mapping to 2 H1.

SOURCE

BFZB (I-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BFZB 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-85298 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BFZB (I-16) is recommended for detection of BFZB 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)], 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); non cross-reactive with isoform 3.

BFZB (I-16) is also recommended for detection of BFZB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BFZB siRNA (h): sc-72649, BFZB siRNA (m): sc-141692, BFZB shRNA Plasmid (h): sc-72649-SH, BFZB shRNA Plasmid (m): sc-141692-SH, BFZB shRNA (h) Lentiviral Particles: sc-72649-V and BFZB shRNA (m) Lentiviral Particles: sc-141692-V.

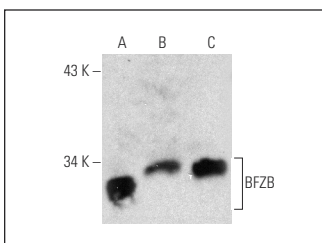
Molecular Weight of BFZB: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MCF7 whole cell lysate: sc-2206 or SK-BR-3 cell lysate: sc-2218.

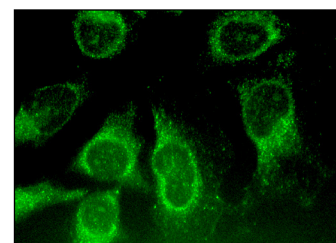
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BFZB (I-16): sc-85298. Western blot analysis of BFZB expression in Hep G2 (A), SKBR-3 (B) and MCF7 (C) whole cell lysates.



BFZB (I-16): sc-85298. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.