JTB (T-12): sc-164719



The Power to Question

BACKGROUND

Jumping translocation (JT) is an unstable and very rare cytogenetic event that results from the jumping of amplified chromosomal segments to telomeres. JTB (jumping translocation breakpoint protein), also known as PAR protein (prostate androgen-regulated protein) or HSPC222, is a 146 amino acid single-pass type I membrane protein that belongs to the JTB family. Ubiquitously expressed in all normal human tissues, JTB protein levels increase during the S phase of the cell cycle, with the highest levels expressed during $\rm G_2$ and mitosis. Overexpressed in many tumors, JTB may play a role in the regulation of cell proliferation. JTB is required for normal cytokinesis during mitosis, and may be a member of the chromosomal passenger complex (CPC), a key regulator of mitosis. Existing as two alternatively spliced isoforms, the gene encoding JTB maps to human chromosome 1q21.3.

REFERENCES

- Hatakeyama, S., et al. 1999. JTB: a novel membrane protein gene at 1q21 rearranged in a jumping translocation. Oncogene 18: 2085-2090.
- 2. Platica, O., et al. 2000. PAR, a novel androgen regulated gene, ubiquitously expressed in normal and malignant cells. Int. J. Oncol. 16: 1055-1061.
- Xu, X.F., et al. 2007. RNA interference-mediated silencing of the PAR gene inhibits the growth of PC3 cells via the induction of G₂/M cell cycle arrest and apoptosis. J. Gene Med. 9: 1065-1070.
- Xu, X., et al. 2007. Malignant phenotype of PC3 cell line was inhibited by siRNA targeting PAR gene. J. Huazhong Univ. Sci. Technol. Med. Sci. 27: 440-443
- Kanome, T., et al. 2007. Characterization of Jumping translocation breakpoint (JTB) gene product isolated as a TGF-β1-inducible clone involved in regulation of mitochondrial function, cell growth and cell death. Oncogene 26: 5991-6001.
- Ebnet, K., et al. 2008. Regulation of epithelial and endothelial junctions by PAR proteins. Front. Biosci. 13: 6520-6536.
- Pan, J.S., et al. 2009. Interacting with HBsAg compromises resistance of jumping translocation breakpoint protein to ultraviolet radiation-induced apoptosis in 293FT cells. Cancer Lett. 285: 151-156.
- 8. Chen, L., et al. 2010. Chromosome 1q21 amplification and oncogenes in hepatocellular carcinoma. Acta Pharmacol. Sin. 31: 1165-1171.
- 9. Platica, M., et al. 2011. PAR, a protein involved in the cell cycle, is functionally related to chromosomal passenger proteins. Int. J. Oncol. 38: 777-785.

CHROMOSOMAL LOCATION

Genetic locus: JTB (human) mapping to 1q21.3; Jtb (mouse) mapping to 3 F1.

SOURCE

JTB (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of JTB of human origin.

RESEARCH USE

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

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-164719 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JTB (T-12) is recommended for detection of JTB of mouse, rat and 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).

JTB (T-12) is also recommended for detection of JTB in additional species, including equine, canine and bovine.

Suitable for use as control antibody for JTB siRNA (h): sc-88371, JTB siRNA (m): sc-146334, JTB shRNA Plasmid (h): sc-88371-SH, JTB shRNA Plasmid (m): sc-146334-SH, JTB shRNA (h) Lentiviral Particles: sc-88371-V and JTB shRNA (m) Lentiviral Particles: sc-146334-V.

Molecular Weight of JTB: 16 kDa.

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) 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.

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**