SANTA CRUZ BIOTECHNOLOGY, INC.

FKBP6 (AT9B7): sc-517401

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The Power to Question

BACKGROUND

FKBP6 (FK506-binding protein 6), also known as Rotamase, Immunophilin FKBP36 and Peptidyl-prolyl cis-trans isomerase FKBP6, is a 327 amino acid protein that, like other PPIases, accelerate the folding of proteins. As a component in synaptonemal complexes, FKBP6 is involved in homologous chromosomes pairing and male infertility in mice. There has been some suggestion that FKBP6 may play a role in modifying the susceptibility to idiopathic spermatogenic impairment in humans. Ubiquitously expressed in all tissues, FKBP6 is present at highest levels in testis, liver, kidney, skeletal muscle and heart. The gene encoding FKBP6 maps within a region of human chromosome 7 that has been implicated in Williams-Beuren syndrome, a rare developmental disorder involving abnormalities of the cardiovascular and musculoskeletal systems. Hemizygous deletion of FKBP6 may contribute to hypercalcemia and growth delay in Williams-Beuren syndrome.

REFERENCES

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2. Crackower, M.A., et al. 2003. Essential role of FKBP6 in male fertility and homologous chromosome pairing in meiosis. Science 300: 1291-1295.
3. Metcalfe, K., et al. 2005. Autosomal dominant inheritance of Williams-Beuren syndrome in a father and son with haploinsufficiency for FKBP6. Clin. Dysmorphol. 14: 61-65.
4. Westerveld, G.H., et al. 2005. Mutations in the chromosome pairing gene FKBP6 are not a common cause of non-obstructive azoospermia. Mol. Hum. Reprod. 11: 673-675.
5. Miyamato, T., et al. 2006. Is a genetic defect in FKBP6 a common cause of azoospermia in humans? Cell. Mol. Biol. Lett. 11: 557-569.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 604839. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. van Hagen, J.M., et al. 2007. Comparing two diagnostic laboratory tests for Williams syndrome: fluorescent *in situ* hybridization versus multiplex ligation-dependent probe amplification. Genet. Test. 11: 321-327.
8. Zhang, W., et al. 2007. Mutation screening of the FKBP6 gene and its association study with spermatogenic impairment in idiopathic infertile men. Reproduction 133: 511-516.
9. Li, H.H., et al. 2009. Induced chromosome deletions cause hypersociability and other features of Williams-Beuren syndrome in mice. EMBO Mol. Med. 1: 50-65.

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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: FKBP6 (human) mapping to 7q11.23.

SOURCE

FKBP6 (AT9B7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-327 of FKBP6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FKBP6 (AT9B7) is recommended for detection of FKBP6 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FKBP6 siRNA (h): sc-89491, FKBP6 shRNA Plasmid (h): sc-89491-SH and FKBP6 shRNA (h) Lentiviral Particles: sc-89491-V.

Molecular Weight of FKBP6: 36 kDa.

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).

DATA

RESEARCH USE

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