SANTA CRUZ BIOTECHNOLOGY, INC.

JIP-4 (H-165): sc-134972

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

JIP-4 (c-Jun-amino-terminal kinase-interacting protein 4, Mitogen-activated protein kinase 8-interacting protein 4, Sunday driver 1) is a 1,321 amino acid protein encoded by the human gene SPAG9. It contains a large N-terminal extracellular domain, a short transmembrane helical domain, and a cytoplasmic domain. There are six N-glycosylation sites, several phosphorylation sites for cAMP/cGMP-dependent protein kinase, protein kinase C and casein kinase II, and ten putative myristoylation sites. There is also a leucine zipper motif, with six leucine repeats, that may aid in dimerization since there is no upstream basic domain characteristic of DNA binding proteins. The JNK-interacting protein (JIP) group of scaffold proteins selectively mediates JNK signaling by aggregating specific components of the MAPK cascade to form a functional JNK signaling module. JIP-4 is a cytoplasmic, perinuclear protein that has eight known isoforms whose expression varies by tissue and disease state.

REFERENCES

1. Shankar, S., et al. 1998. Cloning of a novel human testis mRNA specifically expressed in testicular haploid germ cells, having unique palindromic sequences and encoding a leucine zipper dimerization motif. Biochem. Biophys. Res. Commun. 243: 561-565.
2. Bowman, A.B., et al. 2001. Kinesin-dependent axonal transport is mediated by the Sunday driver (SYD) protein. Cell 103: 583-594.
3. Lee, C.M., et al. 2002. JLP: a scaffolding protein that tethers JNK/p38MAPK signaling modules and transcription factors. Proc. Natl. Acad. Sci. USA 99: 14189-14194.
4. Yasuoka, H., et al. 2003. A novel protein highly expressed in testis is overexpressed in systemic sclerosis fibroblasts and targeted by autoantibodies. J. Immunol. 171: 6883-6890.
5. Jagadish, N., et al. 2005. Sperm associated antigen 9 (SPAG9): a new member of c-Jun NH_2-terminal kinase (JNK) interacting protein exclusively expressed in testis. Keio J. Med. 54: 66-71.
6. Jagadish, N., et al. 2005. Characterization of a novel human sperm-associated antigen 9 (SPAG9) having structural homology with c-Jun N-terminal kinase-interacting protein. Biochem. J. 389: 73-82.

CHROMOSOMAL LOCATION

Genetic locus: SPAG9 (human) mapping to 17q21.33; Spag9 (mouse) mapping to 11 D.

SOURCE

JIP-4 (H-165) is a rabbit polyclonal antibody raised against amino acids 164-328 (deletion 248-261) mapping near the N-terminus of JIP-4 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.

APPLICATIONS

JIP-4 (H-165) is recommended for detection of JIP-4 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).

JIP-4 (H-165) is also recommended for detection of JIP-4 in additional species, including canine.

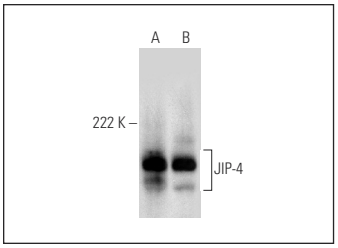
Suitable for use as control antibody for JIP-4 siRNA (h): sc-62513, JIP-4 siRNA (m): sc-62514, JIP-4 shRNA Plasmid (h): sc-62513-SH, JIP-4 shRNA Plasmid (m): sc-62514-SH, JIP-4 shRNA (h) Lentiviral Particles: sc-62513-V and JIP-4 shRNA (m) Lentiviral Particles: sc-62514-V.

Molecular Weight (predicted) of JIP-4: 147 kDa.

Molecular Weight (observed) of JIP-4: 177 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or AML-193 whole cell lysate.

DATA



JIP-4 (H-165): sc-134972. Western blot analysis of JIP-4 expression in HeLa (**A**) and AML-193 (**B**) whole cell lysates.

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.