

JIP-4 (F-14): sc-67649

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

- 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.
- Bowman, A.B., et al. 2001. Kinesin-dependent axonal transport is mediated by the Sunday driver (SYD) protein. *Cell* 103: 583-594.
- 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.
- Yasuoka, H., et al. 2003. A novel protein highly expressed in testis is over-expressed in systemic sclerosis fibroblasts and targeted by autoantibodies. *J. Immunol.* 171: 6883-6890.
- Jagadish, N., et al. 2005. Sperm associated antigen 9 (SPAG9): a new member of c-Jun NH₂-terminal kinase (JNK) interacting protein exclusively expressed in testis. *Keio J. Med.* 54: 66-71.
- 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.
- Kukekov, N.V., et al. 2006. Direct interaction of the molecular scaffolds POSH and JIP is required for apoptotic activation of JNKs. *J. Biol. Chem.* 281: 15517-15524.
- Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: SPAG9 (human) mapping to 17q21.33.

SOURCE

JIP-4 (F-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-67649 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JIP-4 (F-14) is recommended for detection of JIP-4 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)], 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 (F-14) is also recommended for detection of JIP-4 in additional species, including equine, canine, bovine, porcine and avian.

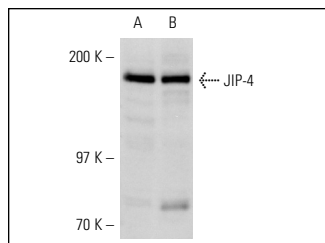
Suitable for use as control antibody for JIP-4 siRNA (h): sc-62513, JIP-4 shRNA Plasmid (h): sc-62513-SH and JIP-4 shRNA (h) Lentiviral Particles: sc-62513-V.

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

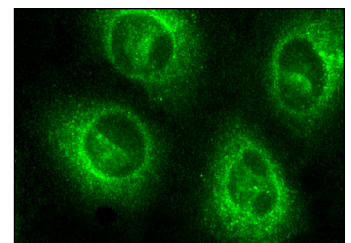
Molecular Weight (observed) of JIP-4: 177 kDa.

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

DATA



JIP-4 (F-14): sc-67649. Western blot analysis of JIP-4 expression in HeLa (A) and AML-193 (B) whole cell lysates.



JIP-4 (F-14): 67649. 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.


 MONOS
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Try **JIP-4 (H-8): sc-271492**, our highly recommended monoclonal alternative to JIP-4 (F-14).