

JIP-2 (H-95): sc-25549

BACKGROUND

c-Jun NH₂-terminal kinases (JNKs) are distant members of the MAP kinase family. JNK1 is activated by dual phosphorylation at a Thr-Pro-Tyr motif in response to ultraviolet (UV) light, and it functions to phosphorylate c-Jun at amino terminal serine regulatory sites, Ser 63 and Ser 73, resulting in transcriptional activation. Two additional JNK family members have been identified as JNK2 and JNK3. JIP-1 (for JNK interacting protein-1) has been identified as a cytoplasmic inhibitor of JNK that retains JNK in the cytoplasm, thereby inhibiting JNK-regulated gene expression. Evidence suggests that JNK1 and JNK2 bind to JIP-1 with greater affinity than to ATF-2 and c-Jun, which are targets of the JNK signaling pathway. JIP-1 contains an amino terminal JNK binding domain and a carboxy terminal SH3 domain. ATF-2 and c-Jun also contain the JNK binding domain and are thought to compete with JIP-1 for JNK binding. Multiple splice variants of JIP-1, including JIP-1b, JIP-1c (also designated islet-brain 1 or IB-1), JIP-2a, JIP-2b and JIP-3, have been identified in brain.

REFERENCES

1. Pulverer, B.J., et al. 1991. Phosphorylation of c-Jun mediated by MAP kinases. *Nature* 353: 670-674.
2. Smeal, T., et al. 1992. Oncoprotein-mediated signalling cascade stimulates c-Jun activity by phosphorylation of serines 63 and 73. *Mol. Cell. Biol.* 12: 3507-3512.
3. Derijard, B., et al. 1994. JNK1: a protein kinase stimulated by UV light and Ha-Ras that binds and phosphorylates the c-Jun activation domain. *Cell* 76: 1025-1037.
4. Kyriakis, J.M., et al. 1994. The stress-activated protein kinase subfamily of c-Jun kinases. *Nature* 369: 156-160.
5. Davis, R.J. 1995. Transcriptional regulation by MAP kinases. *Mol. Reprod. Dev.* 42: 459-467.

CHROMOSOMAL LOCATION

Genetic locus: MAPK8IP2 (human) mapping to 22q13.33; Mapk8ip2 (mouse) mapping to 15 E3.

SOURCE

JIP-2 (H-95) is a rabbit polyclonal antibody raised against amino acids 41-135 of JIP-2 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.

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.

APPLICATIONS

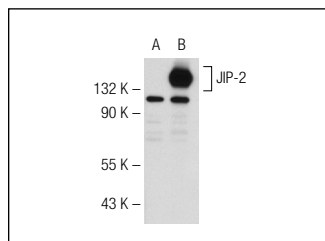
JIP-2 (H-95) is recommended for detection of JIP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JIP-2 siRNA (h): sc-40719, JIP-2 siRNA (m): sc-40720, JIP-2 shRNA Plasmid (h): sc-40719-SH, JIP-2 shRNA Plasmid (m): sc-40720-SH, JIP-2 shRNA (h) Lentiviral Particles: sc-40719-V and JIP-2 shRNA (m) Lentiviral Particles: sc-40720-V.

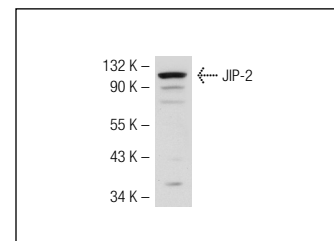
Molecular Weight of JIP-2: 88 kDa.

Positive Controls: JIP-2 (h): 293T Lysate: sc-177412, mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

DATA



JIP-2 (H-95): sc-25549. Western blot analysis of JIP-2 expression in non-transfected: sc-117752 (A) and human JIP-2 transfected: sc-177412 (B) 293T whole cell lysates.



JIP-2 (H-95): sc-25549. Western blot analysis of JIP-2 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Muresan, Z., et al. 2005. Coordinated transport of phosphorylated Amyloid-β precursor protein and c-Jun NH₂-terminal kinase-interacting protein-1. *J. Cell Biol.* 171: 615-625.

PROTOCOLS

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

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Try **JIP-2 (A-9): sc-377490** or **JIP-2 (C-10): sc-398926**, our highly recommended monoclonal alternatives to JIP-2 (H-95).