

# JIP-2 (B-2): sc-376065

## BACKGROUND

c-Jun NH<sub>2</sub>-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.
6. Dickens, M., et al. 1997. A cytoplasmic inhibitor of the JNK signal transduction pathway. *Science* 277: 693-696.

## CHROMOSOMAL LOCATION

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

## SOURCE

JIP-2 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 649-687 within an internal region of JIP-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376065 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

JIP-2 (B-2) is recommended for detection of JIP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

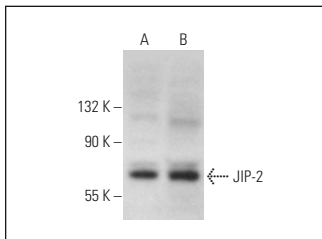
Molecular Weight of JIP-2: 88 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, JIP-2 (m): 293T Lysate: sc-121154 or C6 whole cell lysate: sc-364373.

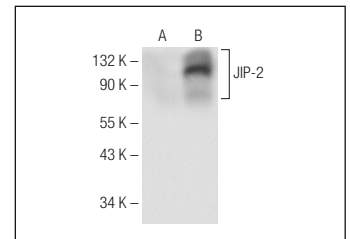
## RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



JIP-2 (B-2): sc-376065. Western blot analysis of JIP-2 expression in RAW 264.7 (A) and C6 (B) whole cell lysates.



JIP-2 (B-2): sc-376065. Western blot analysis of JIP-2 expression in non-transfected: sc-117752 (A) and mouse JIP-2 transfected: sc-121154 (B) 293T 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](http://www.scbt.com) for detailed protocols and support products.