SANTA CRUZ BIOTECHNOLOGY, INC.

JIP-1 (2J8): sc-53552

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

c-Jun NH_2-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: 3507-3513.

CHROMOSOMAL LOCATION

Genetic locus: MAPK8IP1 (human) mapping to 11p11.2; Mapk8ip1 (mouse) mapping to 2 E1.

SOURCE

JIP-1 (2J8) is a mouse monoclonal antibody raised against recombinant full-length JIP-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

JIP-1 (2J8) is recommended for detection of JIP-1 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); may cross-react with JIP-1b .

Suitable for use as control antibody for JIP-1 siRNA (h): sc-35722, JIP-1 siRNA (m): sc-35723, JIP-1 shRNA Plasmid (h): sc-35722-SH, JIP-1 shRNA Plasmid (m): sc-35723-SH, JIP-1 shRNA (h) Lentiviral Particles: sc-35722-V and JIP-1 shRNA (m) Lentiviral Particles: sc-35723-V.

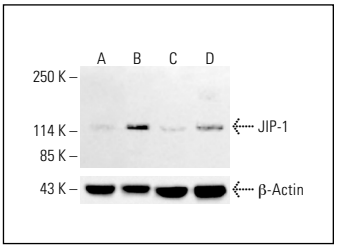
Molecular Weight of JIP-1: 115 kDa.

Positive Controls: rat cerebellum extract: sc-2398, PC-12 cell lysate: sc-2250 or mouse brain extract: sc-2253.

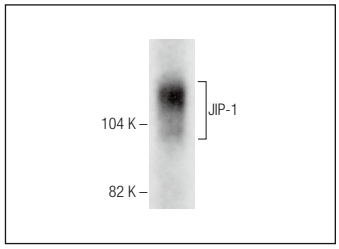
RECOMMENDED SUPPORT REAGENTS

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-1 (2J8): sc-53552. Western blot analysis of JIP-1 expression in untreated K-562 (**A**), chemically-treated K-562 (**B**), untreated HCT-116 (**C**) and chemically-treated HCT-116 (**D**) whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



JIP-1 (2J8): sc-53552. Western blot analysis of JIP-1 expression in rat cerebellum tissue extract.

SELECT PRODUCT CITATIONS

1. Cunningham, C.A., et al. 2016. POSH regulates $CD4^+$ T cell differentiation and survival. J. Immunol. 196: 4003-4013.
2. Rai, R., et al. 2016. Heterogeneous expression of cholecystokinin and gastrin receptor in stomach and pancreatic cancer: an immunohistochemical study. J. Cancer Res. Ther. 12: 411-416.

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 for detailed protocols and support products.

CONJUGATES

See **JIP-1 (B-7): sc-25267** for JIP-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.