SANTA CRUZ BIOTECHNOLOGY, INC.

JIP-3 (F-6): sc-46663

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The JNK-interacting proteins (JIPs) are a family of scaffold proteins that mediate JNK signaling by organizing specific components of the MAPK cascade together to form a functional JNK signaling molecule. JIP-3 (JNK-interacting protein 3), also known as JSAP1 or MAPK8IP3 (mitogen-activated protein kinase 8-interacting protein 3), is a 1,336 amino acid protein that localizes to the cytoplasm and belongs to the JIP family. Expressed in a variety of tissues, including brain and heart, JIP-3 forms homo- or heterooligomeric complexes that can interact with several components of the JNK signaling pathway, thereby functioning as a regulator of kinesin-dependent axonal transport that may also play a role in scaffold formation within neuronal cells. Human JIP-3, which may be phosphorylated upon DNA damage, shares 69% similarity with its mouse counterpart, suggesting a conserved role between species. Multiple isoforms of JIP-3 exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: MAPK8IP3 (human) mapping to 16p13.3; Mapk8ip3 (mouse) mapping to 17 A3.3.

SOURCE

JIP-3 (F-6) is a mouse monoclonal antibody raised against amino acids 211-350 of JIP-3 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.

JIP-3 (F-6) is available conjugated to agarose (sc-46663 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46663 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46663 PE), fluorescein (sc-46663 FITC), Alexa Fluor® 488 (sc-46663 AF488), Alexa Fluor® 546 (sc-46663 AF546), Alexa Fluor® 594 (sc-46663 AF594) or Alexa Fluor® 647 (sc-46663 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46663 AF680) or Alexa Fluor® 790 (sc-46663 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

JIP-3 (F-6) is recommended for detection of JIP-3 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), immunohistochemistry (including paraffin-embedded sections) (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-3 siRNA (h): sc-37123, JIP-3 siRNA (m): sc-37124, JIP-3 shRNA Plasmid (h): sc-37123-SH, JIP-3 shRNA Plasmid (m): sc-37124-SH, JIP-3 shRNA (h) Lentiviral Particles: sc-37123-V and JIP-3 shRNA (m) Lentiviral Particles: sc-37124-V.

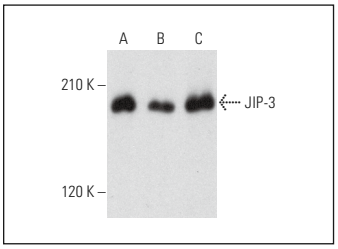
Molecular Weight of JIP-3: 147 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, BC_3H1 cell lysate: sc-2299 or EOC 20 whole cell lysate: sc-364187.

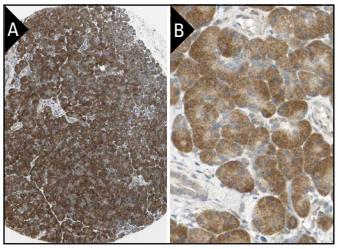
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



JIP-3 (F-6): sc-46663. Western blot analysis of JIP-3 expression in BC_3H1 (**A**), EOC 20 (**B**) and PC-12 (**C**) whole cell lysates.



JIP-3 (F-6): sc-46663. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine pancreas and islet cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Sun, T., et al. 2013. c-Jun NH_2-terminal kinase (JNK)-interacting protein-3 (JIP3) regulates neuronal axon elongation in a kinesin- and JNK-dependent manner. J. Biol. Chem. 288: 14531-14543.
2. Chen, B., et al. 2015. Up-regulation of c-Jun NH_2-terminal kinase-interacting protein 3 (JIP3) contributes to BDNF-enhanced neurotransmitter release. J. Neurochem. 135: 453-465.
3. Sun, T., et al. 2017. JIP1 and JIP3 cooperate to mediate TrkB anterograde axonal transport by activating kinesin-1. Cell. Mol. Life Sci. 74: 4027-4044.
4. Matsuba, S., et al. 2017. Identification of secretory leukoprotease inhibitor as an endogenous negative regulator in allergic effector cells. Front. Immunol. 8: 1538.
5. Liu, X., et al. 2020. Multiple protein and mRNA expression correlations in the rat cerebral cortex after ischemic injury and repair due to buchang naoxintong jiaonang (BNJ) intervention. Biomed. Pharmacother. 125: 109917.
6. Ahmad, V., et al. 2021. Syd/JIP3 controls tissue size by regulating Diap1 protein turnover downstream of Yorkie/YAP. Dev. Biol. 469: 37-45.
7. Boecker, C.A., et al. 2021. Increased LRRK2 kinase activity alters neuronal autophagy by disrupting the axonal transport of autophagosomes. Curr. Biol. 31: 2140-2154.e6.
8. Cason, S.E., et al. 2021. Sequential dynein effectors regulate axonal autophagosome motility in a maturation-dependent pathway. J. Cell Biol. 220: e202010179.

RESEARCH USE

For research use only, not for use in diagnostic procedures.