SANTA CRUZ BIOTECHNOLOGY, INC.

p-JNK (9H8): sc-81502

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mitogen-activated protein (MAP) kinases ERK 1 and ERK 2 are proline-directed kinases that are activated through concomitant phosphorylation of tyrosine and threonine residues. The JNK family, which includes JNK1, JNK2, and JNK3, is distantly related to the MAP kinase family, members of which are activated by dual phosphorylation at a Thr-Pro-Tyr motif, specifically at Thr-183 and Tyr-185 residues, in response to ultraviolet (UV) light. This motif is divergent from the Thr-Glu-Tyr motif characteristic of the MAP kinase family. JNK is phosphorylated by JNK-activating kinase (JNKK1 and JNKK2), which are members of the MEK family. Activated JNK mediates the phosphorylation of c-Jun at the amino terminal serine regulatory sites, Ser-63 and Ser-73, which stimulates the transactivation function of c-Jun.

REFERENCES

1. Pulverer, B.J., et al. 1991. Phosphorylation of c-Jun mediated by MAP kinases. Nature 353: 670-674.
2. Alvarez, E., et al. 1991. Pro-Leu-Ser/Thr-Pro is a consensus primary sequence for substrate protein phosphorylation: characterization of the phosphorylation of c-Myc and c-Jun proteins by an epidermal growth factor receptor threonine 669 protein kinase. J. Biol. Chem. 266: 15277-15285.
3. Boulton, T.G., et al. 1991. ERKs: a family of protein-serine/threonine kinases that are activated and tyrosine phosphorylated in response to Insulin and NGF. Cell 65: 663-675.

SOURCE

p-JNK (9H8) is a mouse monoclonal antibody raised against phosphopeptide corresponding to amino acid residues surrounding the pThr-Gly/Pro-pTyr motif of JNK of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

APPLICATIONS

p-JNK (9H8) is recommended for detection of both Tyr 185 phosphorylated JNK1, JNK2 and JNK3 and Thr 183 and Tyr 185 dually phosphorylated JNK1, JNK2 and JNK3 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); non cross-reactive with the non-phosphorylated form of JNK.

Molecular Weight of p-JNK p46 isoform: 46 kDa.

Molecular Weight of p-JNK p54 isoform: 54 kDa.

Positive Controls: NIH/3T3 + UV cell lysate: sc-3804.

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.

SELECT PRODUCT CITATIONS

1. Cheng, Y., et al. 2008. ERK and JNK mediate TNFα-induced p53 activation in apoptotic and autophagic L929 cell death. Biochem. Biophys. Res. Commun. 376: 483-488.
2. Chang, C.W., et al. 2009. Procaspase 8 and Bax are up-regulated by distinct pathways in streptococcal pyrogenic exotoxin B-induced apoptosis. J. Biol. Chem. 284: 33195-33205.
3. Guo, C., et al. 2011. The tumor suppressor RASSF1A prevents dephosphorylation of the mammalian STE20-like kinases MST1 and MST2. J. Biol. Chem. 286: 6253-6261.
4. Peng, D., et al. 2012. Glutathione peroxidase 7 protects against oxidative DNA damage in oesophageal cells. Gut 61: 1250-1260.
5. Yu, L., et al. 2013. Exosomes with membrane-associated TGF-β1 from gene-modified dendritic cells inhibit murine EAE independently of MHC restriction. Eur. J. Immunol. 43: 2461-2472.
6. Wang, Z., et al. 2015. Protection of rat intestinal epithelial cells from ischemia/reperfusion injury by (D-Ala2, D-Leu5)-enkephalin through inhibition of the MKK7-JNK signaling pathway. Mol. Med. Rep. 12: 4079-4088.
7. Zang, F., et al. 2016. Autophagy is involved in regulating the immune response of dendritic cells to influenza A (H1N1) PDM09 infection. Immunology 148: 56-69.
8. Halder, K., et al. 2017. *Mycobacterium indicus pranii* (Mw) inhibits invasion by reducing matrix metalloproteinase (MMP-9) via AKT/ERK-1/2 and PKC signaling: a potential candidate in melanoma cancer therapy. Cancer Biol. Ther. 18: 850-862.
9. Wang, S., et al. 2017. Dietary teasaponin ameliorates alteration of Gut microbiota and cognitive decline in diet-induced obese mice. Sci. Rep. 7: 12203.
10. Fu, Y., et al. 2018. Gastroprotective and anti-ulcer effects of oxymatrine against several gastric ulcer models in rats: possible roles of antioxidant, antiinflammatory, and prosurvival mechanisms. Phytother. Res. 32: 2047-2058.
11. Qiang, L., et al. 2019. *Mycobacterium tuberculosis* Mce2E suppresses the macrophage innate immune response and promotes epithelial cell proliferation. Cell. Mol. Immunol. 16: 380-391.
12. Zhang, Z., et al. 2019. Repurposing brigatinib for the treatment of colorectal cancer based on inhibition of ER-phagy. Theranostics 9: 4878-4892.

CONJUGATES

See **p-JNK (G-7): sc-6254** for p-JNK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.