**BACKGROUND**

c-Jun N-terminal kinases (JNKs) phosphorylate and augment transcriptional activity of c-Jun. JNKs originate from three genes that yield ten isoforms through alternative mRNA splicing, including JNK1α1, JNK1β1, JNK2α1, JNK2β1 and JNK3α1, which represent the p46 isoforms, and JNK1α2, JNK1β2, JNK2α2, JNK2β2 and JNK3β2, which represent the p54 isoforms. JNKs coordinate cell responses to stress and influence regulation of cell growth and transformation. The human JNK1 (PRKMB, SAPK1, MAPK8) gene maps to chromosome 10q11.22 and shares 83% amino acid identity with JNK2. JNK1 is necessary for normal activation and differentiation of CD4 helper T (TH) cells into TH1 and TH2 effector cells. Capsaicin activates JNK1 and p38 in Ras-transformed human breast epithelial cells. Nitrogen oxides (NOx) upregulate JNK1 in addition to c-Fos, c-Jun and other signaling kinases, including MEK1 and p38.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MAPK8 (human) mapping to 10q11.22, MAPK9 (human) mapping to 5q35.3, Mapk8 (mouse) mapping to 14 B, Mapk9 (mouse) mapping to 11 B1.2.

**SOURCE**

JNK1/2 (D-9) is a mouse monoclonal antibody raised against amino acids 1-384 representing full length JNK1 p46 of human origin.

**PRODUCT**

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

**APPLICATIONS**

JNK1/2 (D-9) is recommended for detection of JNK1 and JNK2 p46 and p54 isoforms 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).

Molecular Weight of JNK1/2 p46 isoform: 46 kDa.
Molecular Weight of JNK1/2 p54 isoform: 54 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, HeLa + TNFα cell lysate: sc-2228 or HeLa + UV irradiated cell lysate: sc-2221.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

JNK1/2 (D-9): sc-137019. Western blot analysis of JNK1/2 expression in RAW 264.7 whole cell lysate.

**SELECT PRODUCT CITATION**

1. Xiao, H., et al. 2011. Deprenyl prevents MPP+ induced oxidative damage in PC12 cells by the upregulation of Nr2-mediated NQO1 expression through the activation of P38/Akt and Erk. Toxicology 290: 286-294.

**CONJUGATES**

See JNK (D-2): sc-7345 for JNK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.