JNK1/2 [pT183/pY185] ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

REF Catalog no. 700031

(See product label for lot information)

Clone/PAD: D12H7L17
Isotype: IgG
Gene ID: 5599, 5601
Protein Acc. no.: P45983, P45984
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation
PBS + 0.09% azide

Immunogen
A peptide corresponding to amino acids 179-189 and 180-189 of P45983 and P45984, respectively.

Immunogen sequence
SFMM[pT]P[pY]VVTR

Reactivity
This antibody reacts with human JNK1/2 [pT183/pY185]. Based on sequence identity and similarity, reactivity to mouse, rat, primates, canine, bovine, swine, chicken, equine, zebrafish, Xenopus and numerous other species is expected.

Specificity
This antibody is specific for JNK1/2 [pT183/pY185] and does not recognize non-phosphorylated JNK1/2.

Storage
2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.

Expiration Date
Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Western Blotting	human	HEK + anisomycin	0.1-0.5 µg/ml
Immunohistochemistry	human	squamous lung, breast and gastric carcinomas, mesothelioma	2-4 µg/ml
Immunofluorescence	human	HeLa	4-6 µg/ml
Flow Cytometry	human	Jurkat + anisomycin	0.5-1 µg/test
Sandwich ELISA	detector		1-5 µg/ml

Background
JNK (c-Jun N-terminal Kinase), also referred to as Stress Activated Protein Kinase (SAPK), is one of the main mitogen-activated protein kinases (MAPKs) in mammals (1-3). JNK is expressed as ten different isoforms due to differential mRNA splicing. The predominant forms are JNK1 (~49 kDa) and JNK2 (~55 kDa). JNK is activated by a variety of cellular signals including growth factors, inflammatory cytokines, and environmental stress (4-7). The JNK/SAPK signaling pathway involves sequential activation of MAPK kinase kinase (MEKK1), MAPK kinase 4 (MKK4) or MKK7, SAPK/JNK, and c-Jun. Full activation of JNK requires phosphorylation of a threonine and a tyrosine residue in the motif Thr-Pro-Tyr. MKK7 and MKK4 phosphorylate JNK at threonine 183 and tyrosine 185, respectively. Recently JNK1 was shown to play a role in human hepatocellular carcinoma by altering histone H3 methylations (8). JNK1/2 has also been shown to mediate autophagic cell death in cancer cells through Beclin 1 regulation (9).

References

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2. Dong, C., et al. (2001) Signaling by the JNK group of MAP kinases. c-Jun N-terminal kinase. J. Clin. Immunol. 21:253-257.
3. Barr, R.K. and M.A. Bogoyevitch (2001) The c-Jun N-terminal protein kinase family of mitogen activated protein kinases (JNK MAPKs). Int. J. Biochem. Cell. Biol. 33:1047-1063.
4. Pearce, A.K. and T.C. Humphrey (2001) Integrating stress-response and cell-cycle checkpoint pathways. Trends Cell. Biol. 11:426-433.
5. Tong, T., et al. (2001) Involvement of the MAP kinase pathways in induction of GADD45 following UV radiation. Exp. Cell Res. 269:64-72.
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8. Li, D-D., et al. (2009) The pivotal role of c-Jun NH2-terminal kinase-mediated Beclin 1 expression during anticancer agents-induced autophagy in cancer cells. Oncogene 28:886-898.
9. Chang, Q., et al. (2009) Sustained JNK1 activation is associated with altered histone H3 methylations in human liver cancer. J. Hepatol. 50:323-333.

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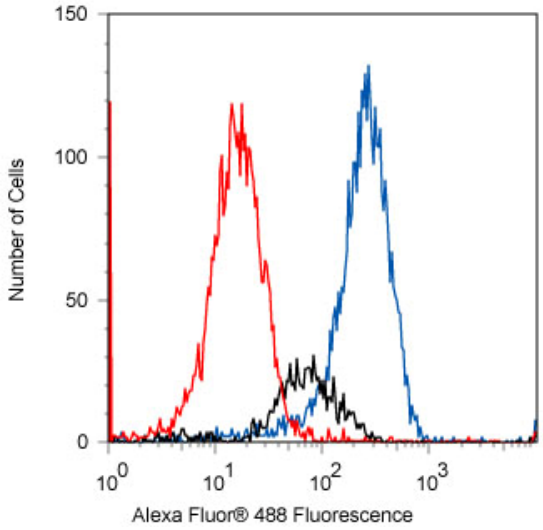
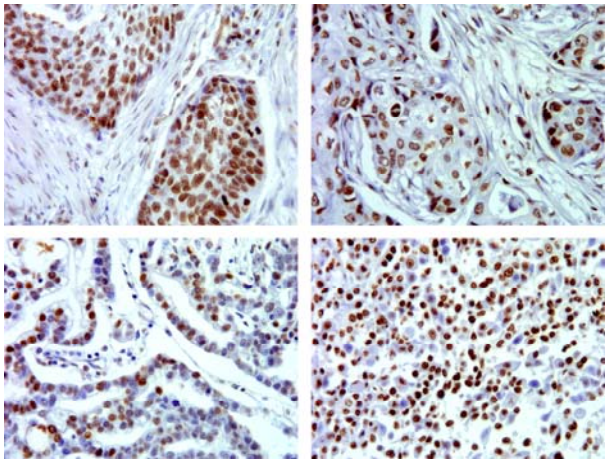


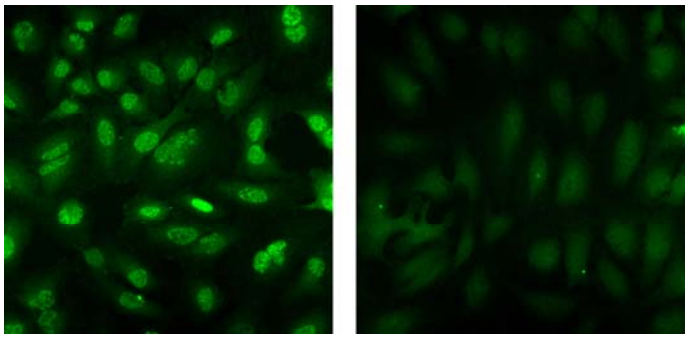
Flow cytometry of Jurkat cells labeled with rabbit anti-JNK1/2 [pT183/pY185] (Cat. No. 700031).

Jurkat cells were stimulated with 25 µg/ml anisomycin for 45 min prior to being fixed and permeabilized using FIX & PERM® reagents (Cat. No. GAS004). Cells were then stained with 0.5 µg JNK1/2 [pT183/pY185] in the absence (blue trace) or in the presence of the phosphopeptide immunogen (red trace) followed by Alexa Fluor® 488 goat anti-rabbit Ig [Cat. No. A11008]. The black trace represents unstimulated cells.



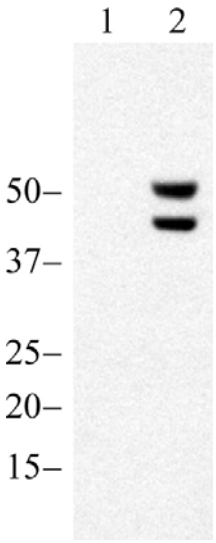
Immunohistochemistry of human squamous lung, breast and gastric carninomas and mesothelioma tissues labeled with rabbit anti-JNK1/2 [pT183/pY185] (Cat. No. 700031).

FFPE human squamous lung (top left), breast (top right) and gastric (bottom left) carcinoma and mesothelioma (bottom right) tissues were labeled with rabbit anti-JNK1/2 [pT183/pS185] (2 µg/ml). Tissues were pretreated with EDTA and detected with SuperPicTure™ Polymer DAB (Cat. No.87-8963). Images were taken at 40x magnification. Note nuclear staining in tumor cells.



Immunocytochemistry of HeLa cells labeled with rabbit anti-JNK1/2 [pT183/pS185] (Cat. No. 700031).

HeLa cells labeled with rabbit anti-JNK1/2 [pT183/pS185] (5 µg/ml) in the absence of peptides (left) or in the presence of peptide used as immunogen (right). Alexa Fluor® 488 goat anti-rabbit (Cat. No. A11008) at 1:1000 was used as secondary antibody.



Western blot of HEK lysates labeled with rabbit anti-JNK1/2 [pT183/pS185] (Cat. No. 700031).

Rabbit anti-JNK1/2 [pT183/pS185] (0.1 µg/mL) was used to label JNK1/2 in untreated HEK lysates (lane 1) or anisomycin treated HEK lysates (lane 2).

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