

# Anti-JNK1 Antibody

## R1309-1



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat, Zebrafish
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 48 kDa

**Description:** Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as proinflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK8/JNK1. In turn, MAPK8/JNK1 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN, JDP2 and ATF2 and thus regulates AP-1 transcriptional activity. Phosphorylates the replication licensing factor CDT1, inhibiting the interaction between CDT1 and the histone H4 acetylase HBO1 to replication origins. Loss of this interaction abrogates the acetylation required for replication initiation. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including p53/TP53 and Yes-associated protein YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Contributes to the survival of erythroid cells by phosphorylating the antagonist of cell death BAD upon EPO stimulation. Mediates starvation-induced BCL2 phosphorylation, BCL2 dissociation from BECN1, and thus activation of autophagy. Phosphorylates STMN2 and hence regulates microtubule dynamics, controlling neurite elongation in cortical neurons. In the developing brain, through its cytoplasmic activity on STMN2, negatively regulates the rate of exit from multipolar stage and of radial migration from the ventricular zone. Phosphorylates several other substrates including heat shock factor protein 4 (HSF4), the deacetylase SIRT1, ELK1, or the E3 ligase ITCH.

<b>Immunogen:</b>	Synthetic peptide within N-terminal human JNK1.
<b>Positive control:</b>	K562 cell lysate, PC-12 cell lysate, Hela cell lysate, HepG2, NIH/3T3, human kidney tissue, mouse kidney tissue.
<b>Subcellular location:</b>	Cytoplasm, Nucleus, Synapse.
<b>Database links:</b>	SwissProt: P45983 Human
<b>Recommended Dilutions:</b>	
<b>WB</b>	1:500-1:1,000
<b>IF-Cell</b>	1:100-1:500
<b>IHC-P</b>	1:50-1:200
<b>FC</b>	1:50-1:100
<b>Storage Buffer:</b>	1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
<b>Storage Instruction:</b>	Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.
<b>Purity:</b>	Immunogen affinity purified.

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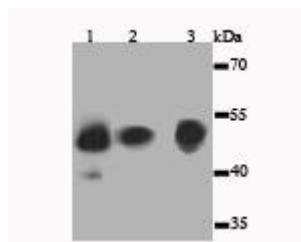
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## Images



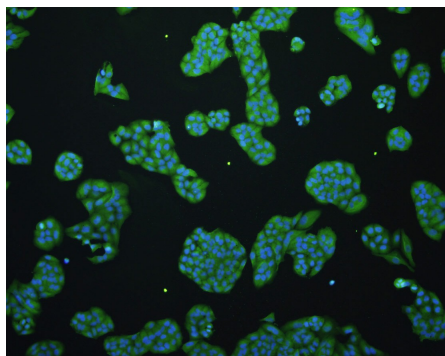
**Fig1:** Western blot analysis of JNK1 on different cell lysates using anti-JNK1 antibody at 1/1,000 dilution.

**Positive control:**

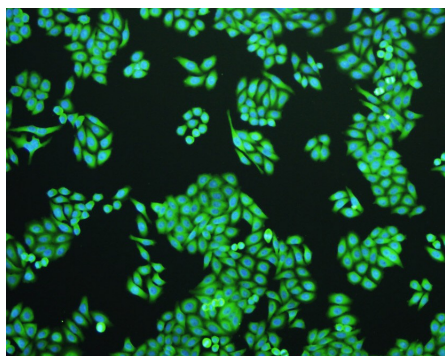
Lane 1: K562 cell lysate

Lane 2: PC-12 cell lysate

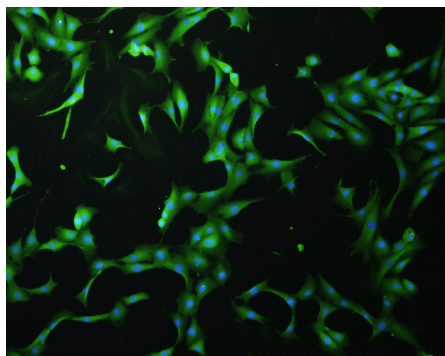
Lane 3: HeLa cell lysate



**Fig2:** ICC staining of JNK1 in HeLa cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



**Fig3:** ICC staining of JNK1 in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



**Fig4:** ICC staining of JNK1 in NIH/3T3 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

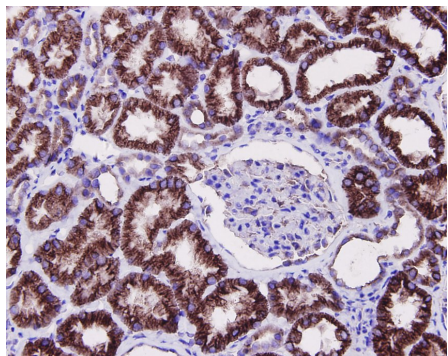
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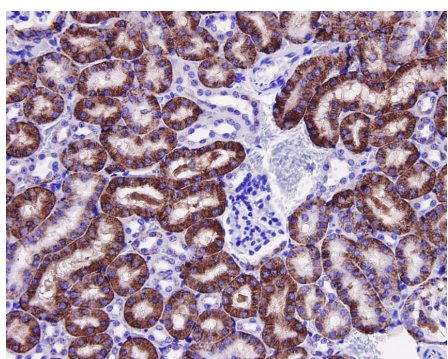
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**Fig5:** Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-JNK1 antibody. Counter stained with hematoxylin.



**Fig6:** Immunohistochemical analysis of paraffin-embedded mouse kidney tissue using anti-JNK1 antibody. Counter stained with hematoxylin.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. "Met66 in the brain-derived neurotrophic factor (BDNF) precursor is associated with anorexia nervosa restrictive type." Ribases M., Gratacos M., Armengol L., de Cid R., Badia A., Jimenez L., Solano R., Vallejo J., Fernandez F., Estivill X. *Mol. Psychiatry* 8:745-751(2003)
2. "Sequence variants of the brain-derived neurotrophic factor (BDNF) gene are strongly associated with obsessive-compulsive disorder." Hall D., Dhillon A., Charalambous A., Gogos J.A., Karayiorgou M. *Am. J. Hum. Genet.* 73:370-376(2003)
3. "Brain-derived neurotrophic factor and obesity in the WAGR syndrome." Han J.C., Liu Q.-R., Jones M., Levinn R.L., Menzie C.M., Jefferson-George K.S., Adler-Wailes D.C., Sanford E.L., Lacbawan F.L., Uhl G.R., Rennert O.M., Yanovski J.A. *N. Engl. J. Med.* 359:918-927(2008)

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