

Rabbit Anti-JNK1 + JNK3 antibody

SL0501R

Product Name JNK1 + JNK3

Chinese Name 氨基末端激酶 1/3 抗体

Alias JNK1 + JNK3; JNK1 + 3; JNK1+JNK3; JNK1/3; c Jun N terminal kinase 1; JNK1; JNK3; JAK1; JNK 1; JNK 46; JNK; JNK1A2; JNK21B1/2; MAPK 8; MAPK8; Mitogen activated protein kinase 8; PRKM8; Protein kinase JNK1; SAPK 1; SAPK gamma; SAPK1; c-Jun; Stress activated protein kinase 1; Tyrosine protein kinase JAK1; MK08_HUMAN.

Research Area Tumour Cell biology immunology Signal transduction transcriptional regulatory factor Kinases Phosphatases

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Chicken, Dog, Pig, Cow, Rabbit,)
WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,Flow-C
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 42kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human JNK1: 201-300/427

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

JNK1(MAPK8) is a member of the MAP kinase family. MAP kinases act as an integration point of biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is activated by various cell targets specific transcription factors, and thus mediates immediate-early gene expression in response to stimuli. The activation of this kinase by tumor-necrosis factor alpha (TNF-alpha) is found to be related to TNF-alpha induced apoptosis. This kinase is also involved in UV radiation induced apoptosis, which is thought to be related to cytochrome c-mediated cell death pathway. Studies of the mouse counter-receptor gene suggested that this kinase play a key role in T cell proliferation, apoptosis and differentiation. Alternatively spliced transcript variants encoding distinct isoforms have been reported. JNK1 is activated by threonine and tyrosine phosphorylation by either of two dual specificity kinases, MAP2K4 and MAP2K7. The JNK pathway is critically involved in diabetes and levels are abnormally elevated in obesity. The development of a cell-permeable JNK inhibitory peptide may have promise as a therapeutic agent for diabetes.

Function:

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 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 regulators including p53/TP53 and Yes-associates 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 cell death by phosphorylation, BCL2 dissociation from BECN1, and thus activation of autophagy. Phosphorylates 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 the multipolar stage and of radial migration from the ventricular zone. Phosphorylates several other proteins including heat shock factor protein 4 (HSF4), the deacetylase SIRT1, ELK1, or the E3 ligase ITCH.

Product Detail

Subunit:

Binds to at least four scaffolding proteins, MAPK8IP1/JIP-1, MAPK8IP2/JIP-2, MAPK8IP3/JIP-3, and SPAG9/MAPK8IP4/JIP-4. These proteins also bind other components of the JNK signaling pathway. Forms a complex with MAPK8IP1 and RGNEF. Interacts with TP53 and WWOX. Interacts with NFKB1. Interacts with NFATC4. Interacts with MECOM; regulates JNK signaling. Interacts with PIN1; the interaction mediates MAPK8 conformational changes leading to the binding of MAPK8 to its substrate. Interacts (phosphorylated form) with NFE2L3; the interaction phosphorylates NFE2L3 in undifferentiated cells.

Subcellular Location:

Cytoplasm. Nucleus.

Post-translational modifications:

Phosphorylated by TAOK2. Dually phosphorylated on Thr-183 and Tyr-185 by MAP2K7 and M which activates the enzyme.

Similarity:

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily. Contains 1 protein kinase domain.

SWISS:

P45983

Gene ID:

5599

5601

Database links:

[Entrez Gene: 5599](#) Human

[Entrez Gene: 5601](#) Human

[Entrez Gene: 26419](#) Mouse

[Entrez Gene: 26420](#) Mouse

[Omim: 601158](#) Human

[Omim: 602896](#) Human

[SwissProt: P45983](#) Human

[SwissProt: P45984](#) Human

[SwissProt: Q91Y86](#) Mouse

[SwissProt: Q9WTU6](#) Mouse

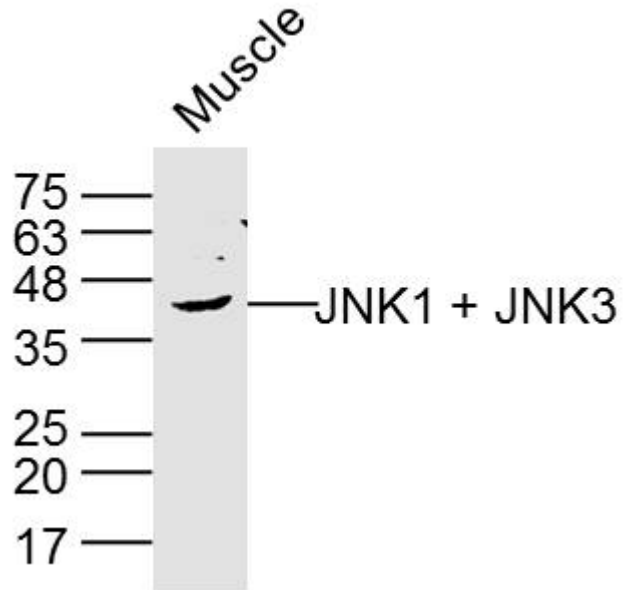
[Unigene: 138211](#) Human

[Unigene: 348446](#) Human

[Unigene: 21495](#) Mouse

[Unigene: 68933](#) Mouse

**Product
Picture**



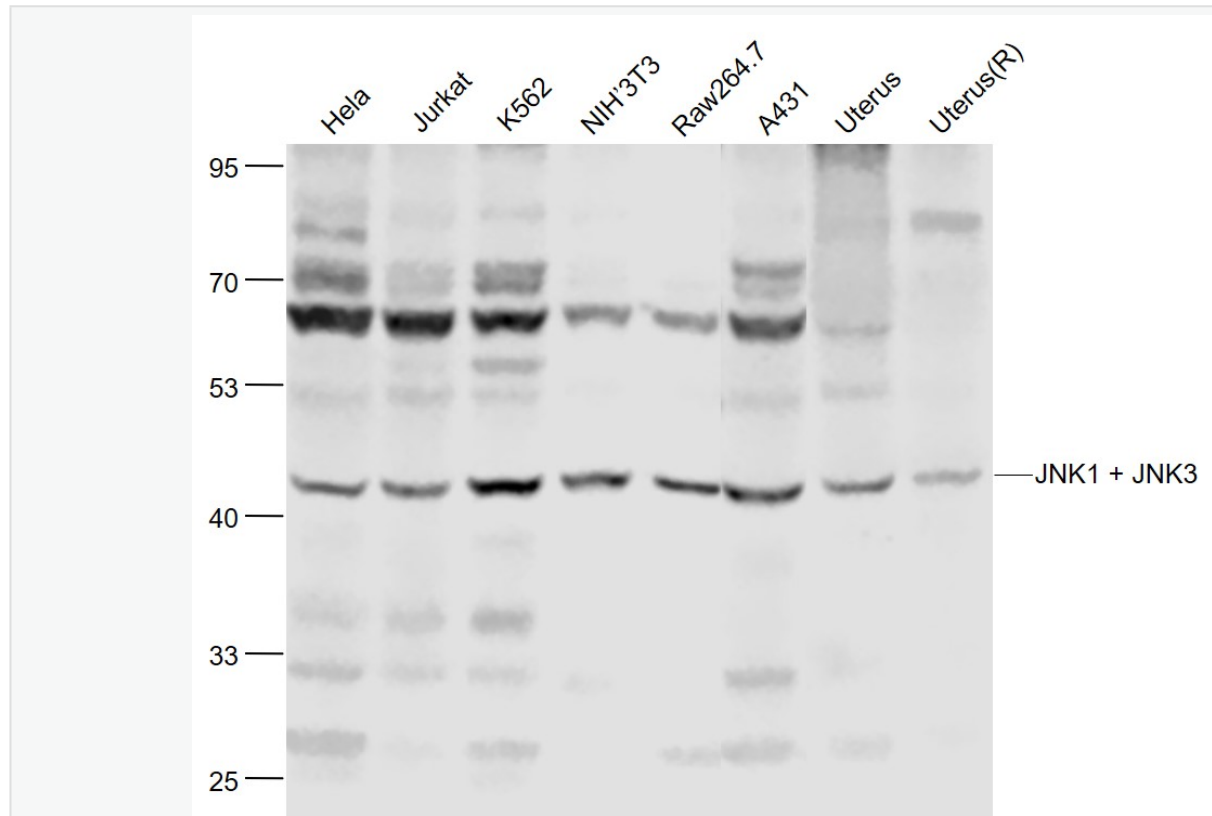
Sample:Muscle (Rat) Lysate at 40 ug

Primary: Anti-JNK1 + JNK3 (SL0501R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD



Sample:

HeLa(Human) Cell Lysate at 30 ug

Jurkat(Human) Cell Lysate at 30 ug

K562(Human) Cell Lysate at 30 ug

NIH/3T3(Mouse) Cell Lysate at 30 ug

Raw264.7(Mouse) Cell Lysate at 30 ug

A431(Human) Cell Lysate at 30 ug

Uterus(Mouse) Lysate at 40 ug

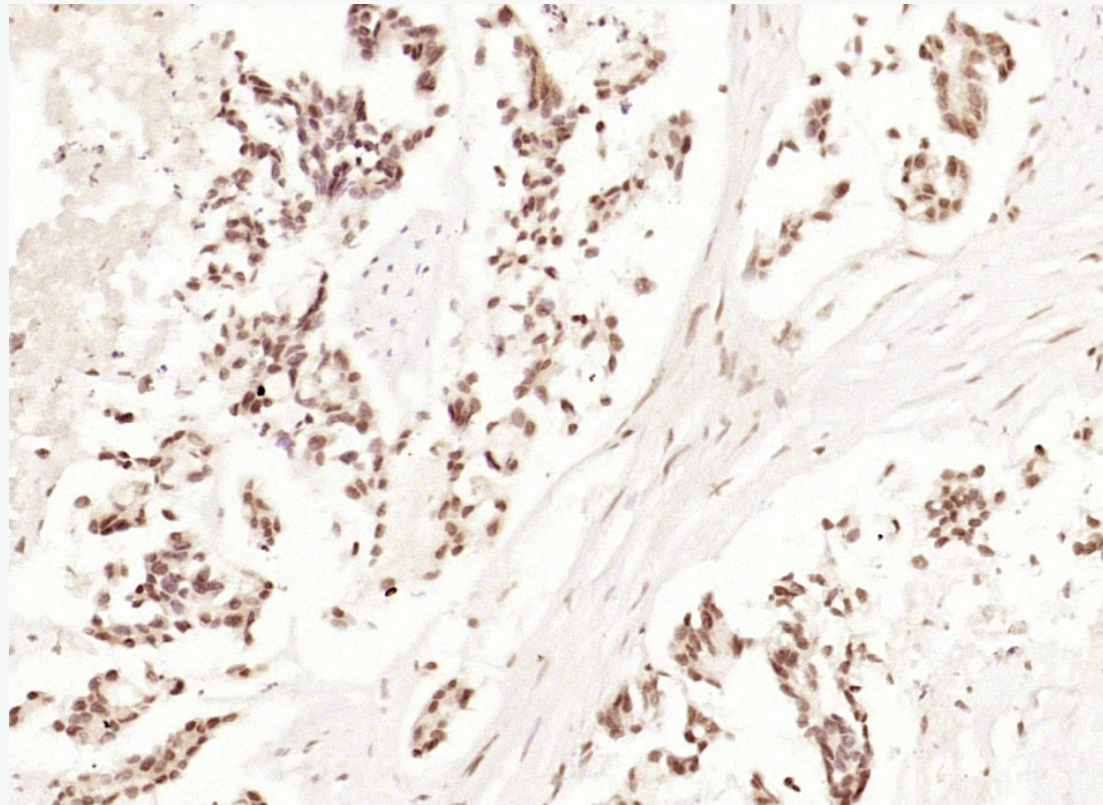
Uterus(Rat) Lysate at 40 ug

Primary: Anti-JNK1 + JNK3 (SL0501R) at 1/1000 dilution

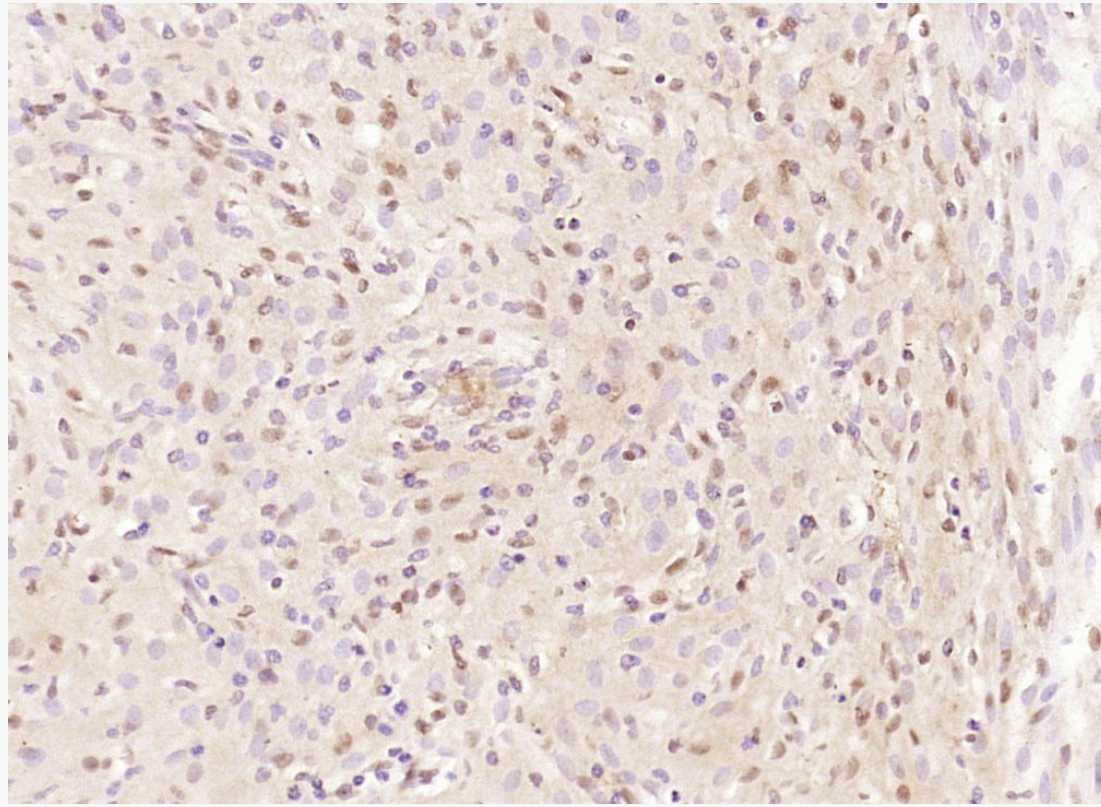
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 46'54 kD

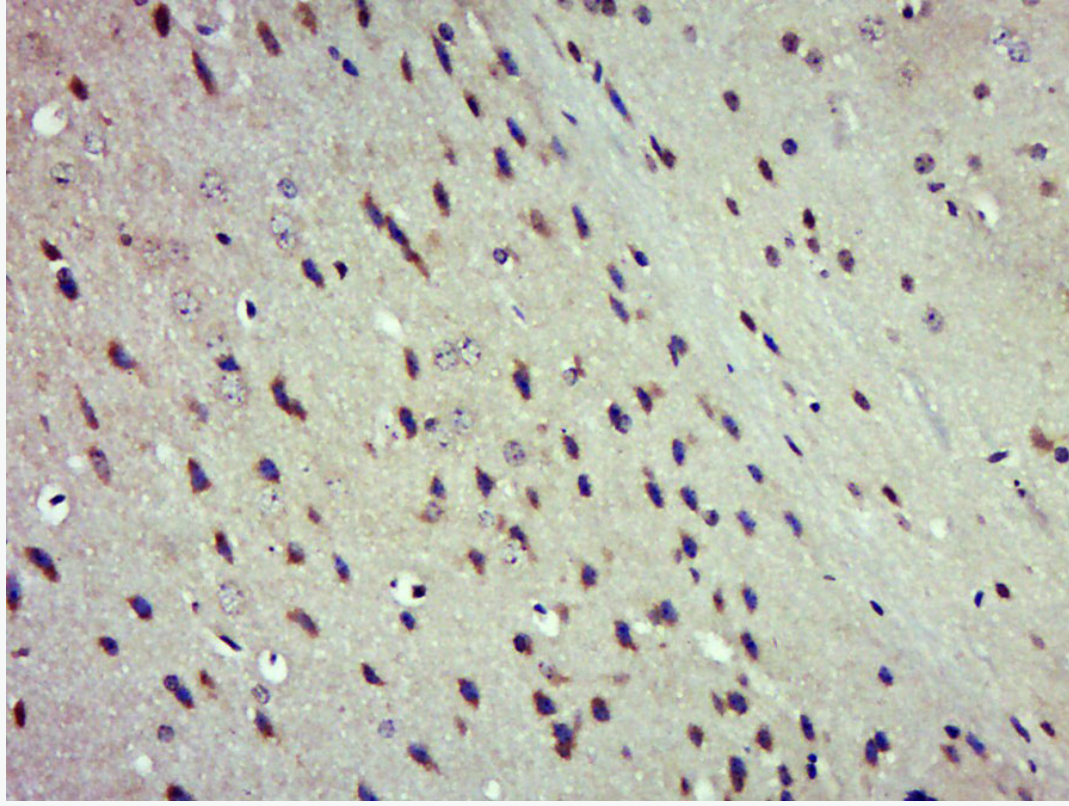
Observed band size: 46 kD



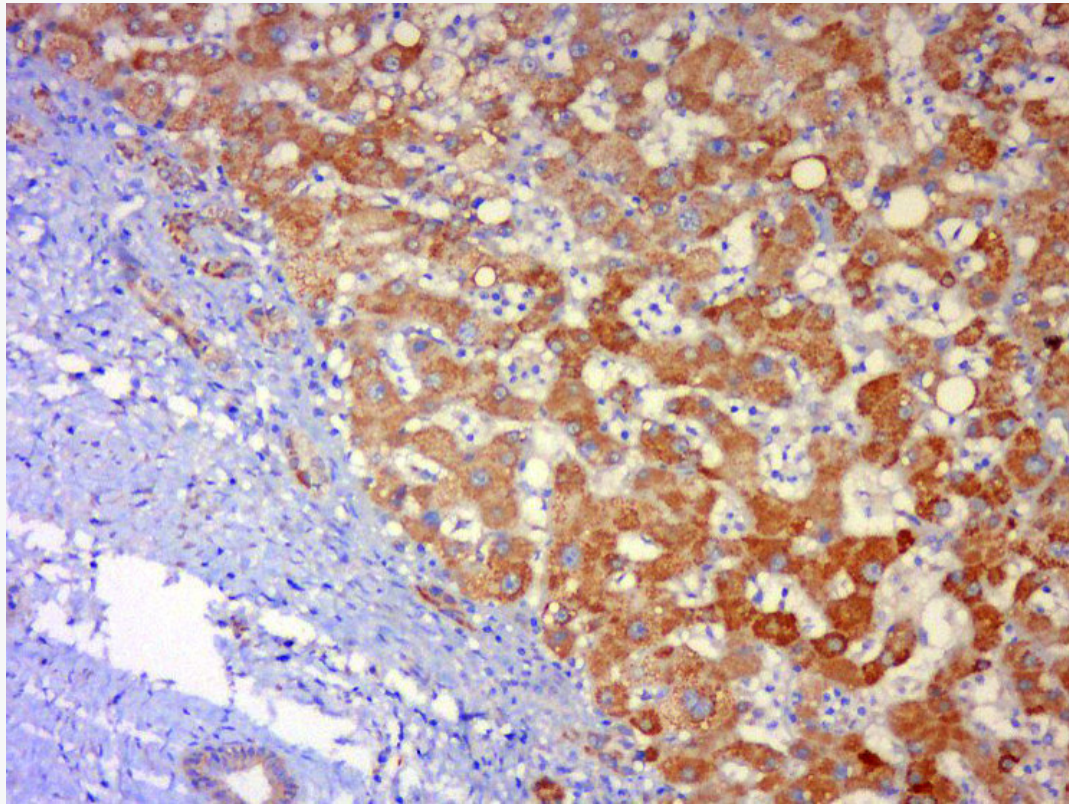
Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 15 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (JNK3) Polyclonal Antibody, Unconjugated (SL0501R) at 1:200 overnight at 4°C, followed by secondary antibody incubation with IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



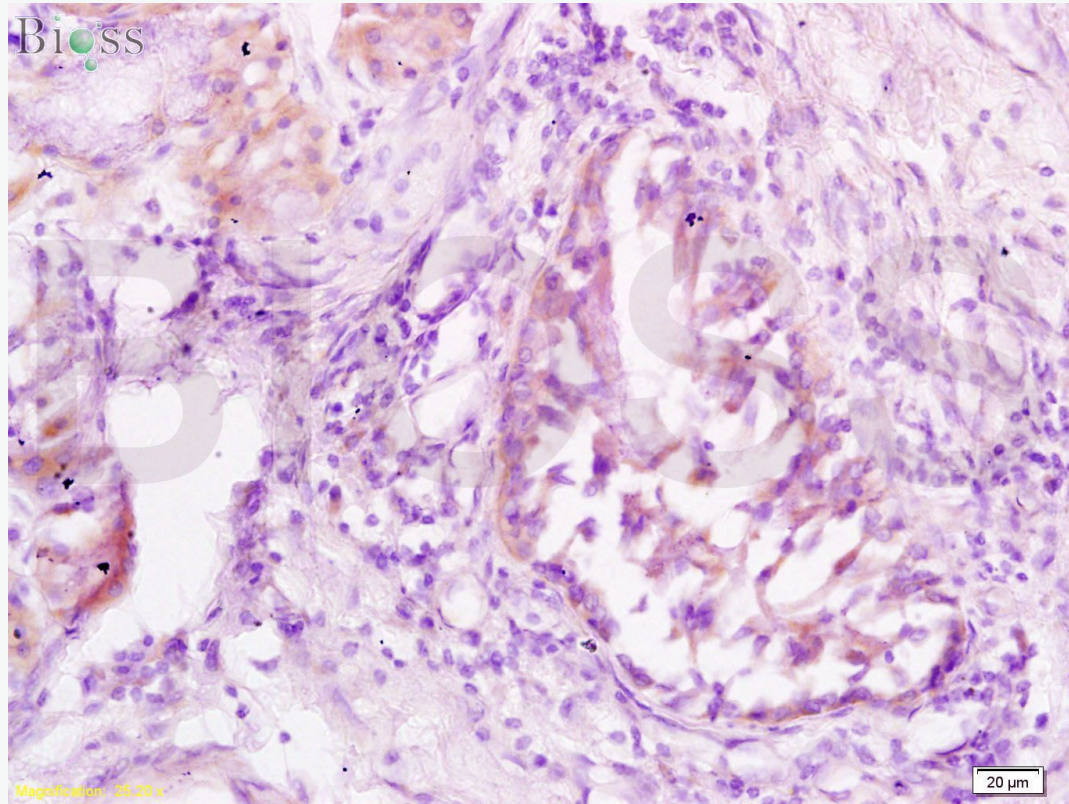
Paraformaldehyde-fixed, paraffin embedded (rat uterus); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (JNK1 + JNK2) Polyclonal Antibody, Unconjugated (SL0501R) at 1:200 overnight at 4°C, followed by operation according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



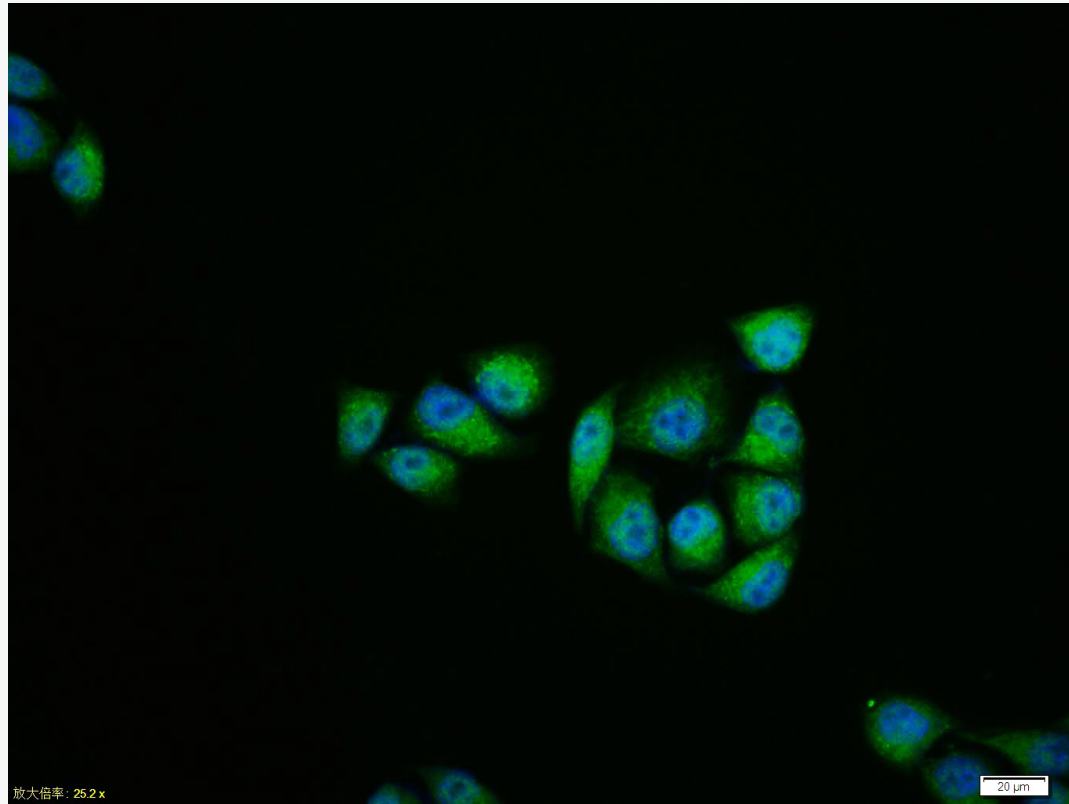
Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (JNK1 + JNK2) Polyclonal Antibody, Unconjugated (SL0501R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



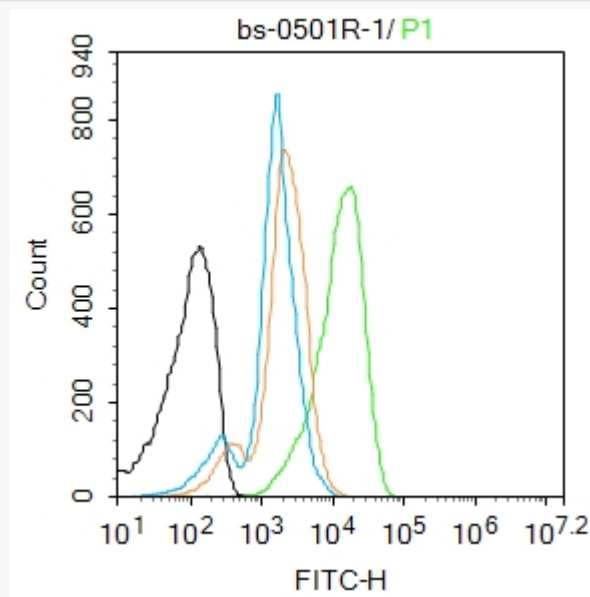
Tissue/cell: human liver carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous
by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C fo
Incubation: Anti-JNK1+ JNK3 Polyclonal Antibody, Unconjugated(SL0501R) 1:500, overnig
followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous
by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C fo
Incubation: Anti-JNK1/3 Polyclonal Antibody, Unconjugated(SL0501R) 1:200, overnight at 4
followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (JNK1 + JNK3) p Antibody, Unconjugated (SL0501R) 1:100, 90 minutes at 37°C; followed by a conjugated Go Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain nuclei.



Blank control: K562.

Primary Antibody (green line): Rabbit Anti-JNK1 + JNK3 antibody (SL0501R)

Dilution: 1 μ g /10⁶ cells;

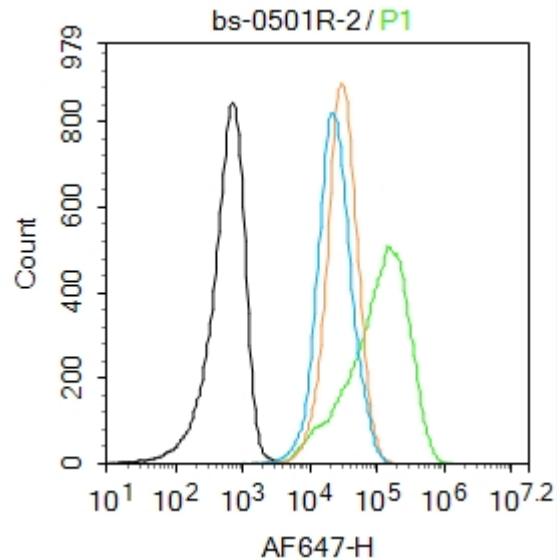
Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 1 μ g /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% methanol for 20 min at -20°C. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control: Jurkat.

Primary Antibody (green line): Rabbit Anti-JNK1 + JNK3 antibody (SL0501R)

Dilution: 2 μ g /10⁶ cells;

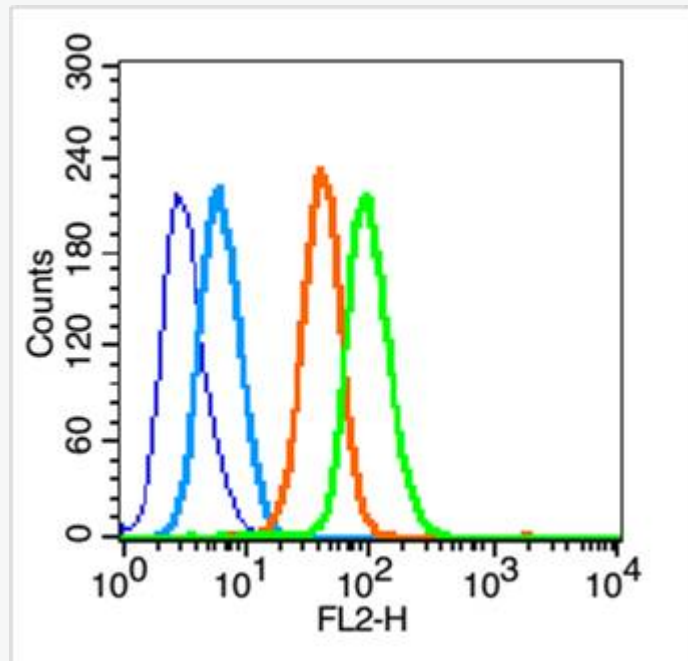
Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: 1 μ g /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% methanol for 20 min at -20°C. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control (blue line): Hep G2 (blue).

Primary Antibody (green line): Rabbit Anti-JNK1 + JNK3 antibody (SL0501R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

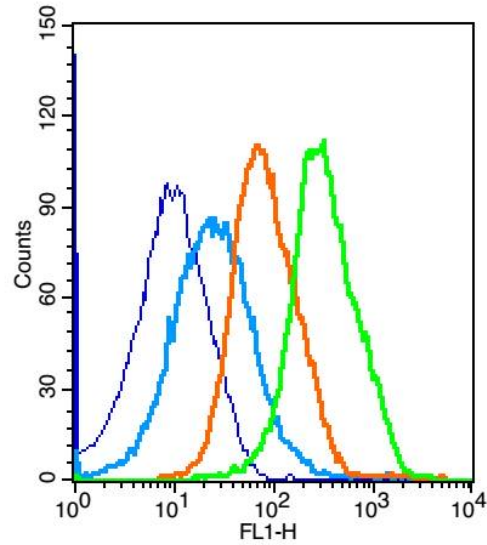
Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 70% ethanol (Overnight at 4°C) and then permeabilized with 90% methanol for 20 min at -20°C . Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions, followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature.

temperature. Acquisition of 20,000 events was performed.



Key	Name	Parameter	Gate
—	(mo)Splenocyte-blank.036	FL1-H	G1
—	bs-0295G-FITC-(mo)Sp#1E5870.037	FL1-H	G1
—	bs-0295P-(FITC)-(mo)#1E5874.038	FL1-H	G1
—	bs-0501R-(FITC)-(mo)#1E5882.048	FL1-H	G1

Blank control: mouse splenocytes(blue)

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit IgG-FITC (blue), Dilution: 1:100 in 1 X PBS containing 0.5% BSA ; Primary Antibody Dilution: 1µl in 1 X PBS containing 0.5% BSA(green).