

## Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody Catalog # ABO13401

### Specification

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#### Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	<a href="#">P45984</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse, Monkey
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Monkey, Mouse, Rat.

#### Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody - Additional Information

Gene ID 5601

#### Other Names

Mitogen-activated protein kinase 9, MAP kinase 9, MAPK 9, 2.7.11.24, JNK-55, Stress-activated protein kinase 1a, SAPK1a, Stress-activated protein kinase JNK2, c-Jun N-terminal kinase 2, MAPK9, JNK2, PRKM9, SAPK1A

#### Calculated MW

48139 MW KDa

#### Application Details

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50<br>FC 1:30

#### Subcellular Localization

Cytoplasm. Nucleus.

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human JNK2

#### Purification

Affinity-chromatography

#### Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

## Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody - Protein Information

**Name** MAPK9

**Synonyms** JNK2, PRKM9, SAPK1A

### Function

Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death (PubMed:<a href="http://www.uniprot.org/citations/10376527" target="\_blank">10376527</a>, PubMed:<a href="http://www.uniprot.org/citations/15805466" target="\_blank">15805466</a>, PubMed:<a href="http://www.uniprot.org/citations/17525747" target="\_blank">17525747</a>, PubMed:<a href="http://www.uniprot.org/citations/19675674" target="\_blank">19675674</a>, PubMed:<a href="http://www.uniprot.org/citations/20595622" target="\_blank">20595622</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="\_blank">21364637</a>, PubMed:<a href="http://www.uniprot.org/citations/22441692" target="\_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/34048572" target="\_blank">34048572</a>). Extracellular stimuli such as pro- inflammatory 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 MAPK9/JNK2 (PubMed:<a href="http://www.uniprot.org/citations/10376527" target="\_blank">10376527</a>, PubMed:<a href="http://www.uniprot.org/citations/15805466" target="\_blank">15805466</a>, PubMed:<a href="http://www.uniprot.org/citations/17525747" target="\_blank">17525747</a>, PubMed:<a href="http://www.uniprot.org/citations/19675674" target="\_blank">19675674</a>, PubMed:<a href="http://www.uniprot.org/citations/20595622" target="\_blank">20595622</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="\_blank">21364637</a>, PubMed:<a href="http://www.uniprot.org/citations/22441692" target="\_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/34048572" target="\_blank">34048572</a>). In turn, MAPK9/JNK2 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/10376527" target="\_blank">10376527</a>). In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1-specific transcription initiation factor RRN3 (PubMed:<a href="http://www.uniprot.org/citations/15805466" target="\_blank">15805466</a>). Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1 (PubMed:<a href="http://www.uniprot.org/citations/17525747" target="\_blank">17525747</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="\_blank">21364637</a>). In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells (PubMed:<a href="http://www.uniprot.org/citations/19290929" target="\_blank">19290929</a>). Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels (PubMed:<a href="http://www.uniprot.org/citations/19290929" target="\_blank">19290929</a>). Plays an important role in the osmotic stress- induced epithelial tight-junctions disruption (PubMed:<a href="http://www.uniprot.org/citations/20595622" target="\_blank">20595622</a>). When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/19675674" target="\_blank">19675674</a>). Participates also in neurite growth in spiral ganglion neurons (By similarity). Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:<a href="http://www.uniprot.org/citations/22441692" target="\_blank">22441692</a>). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteasomal degradation (By similarity). Phosphorylates ALKBH5 in response to reactive oxygen species (ROS), promoting ALKBH5 sumoylation and inactivation (PubMed:<a href="http://www.uniprot.org/citations/34048572" target="\_blank">34048572</a>).

### Cellular Location

Cytoplasm. Nucleus. Note=Colocalizes with POU5F1 in the nucleus.

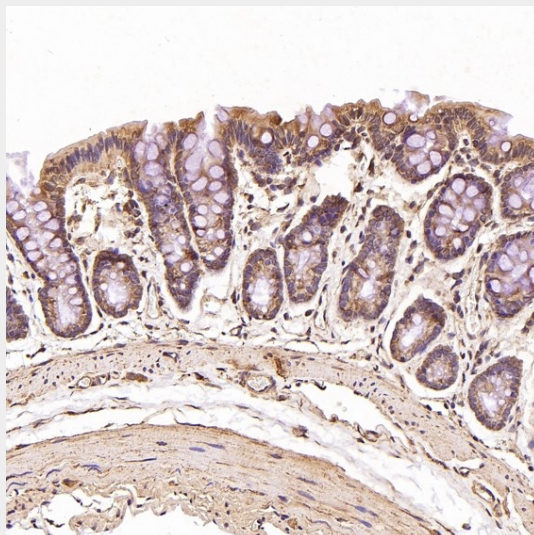
{ECO:0000250|UniProtKB:Q9WTU6}

### Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody - Protocols

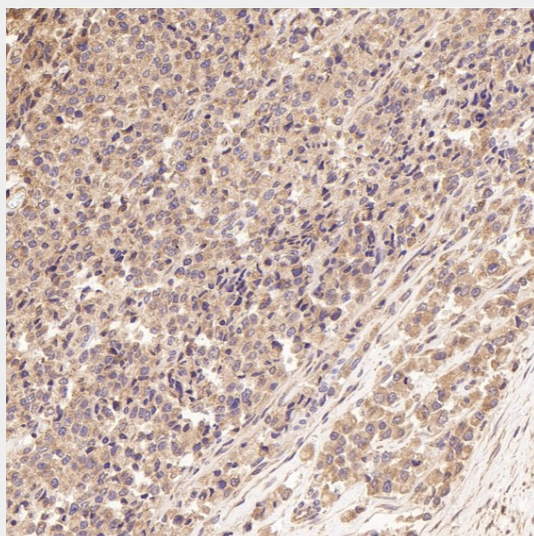
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

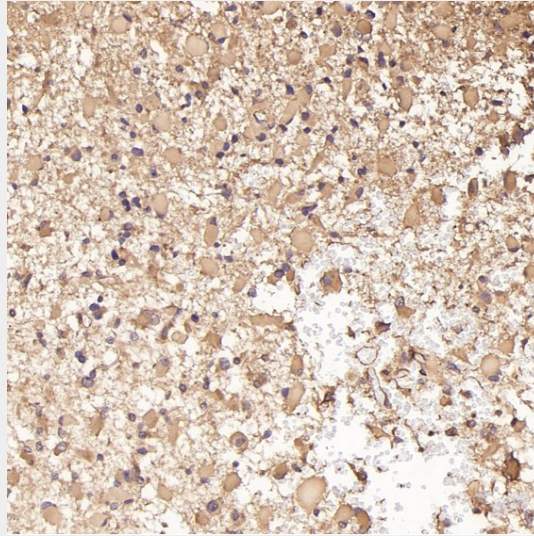
### Anti-JNK2 MAPK9 Rabbit Monoclonal Antibody - Images



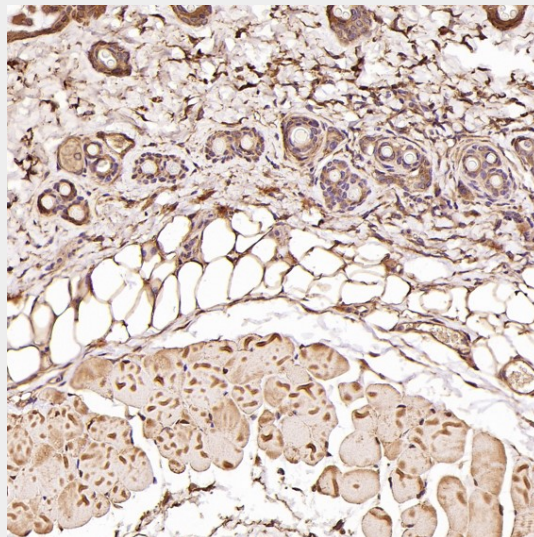
Immunohistochemical analysis of paraffin-embedded Rat intestine, using the Antibody at 1:100 dilution.



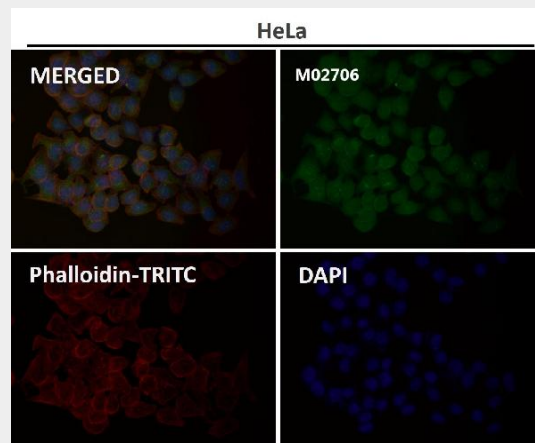
Immunohistochemical analysis of paraffin-embedded Human prostate cancer, using the Antibody at 1:100 dilution.



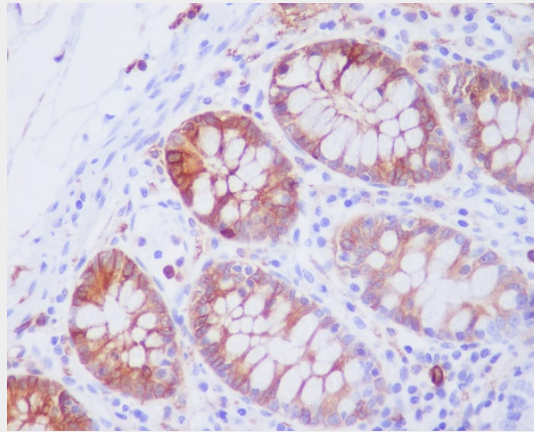
Immunohistochemical analysis of paraffin-embedded Human astrocytoma, using the Antibody at 1:100 dilution.



Immunohistochemical analysis of paraffin-embedded Mouse skin, using the Antibody at 1:100 dilution.



Immunofluorescent analysis using the Antibody at 1:50 dilution.



Immunohistochemical analysis of paraffin-embedded human colon, using JNK2 Antibody.

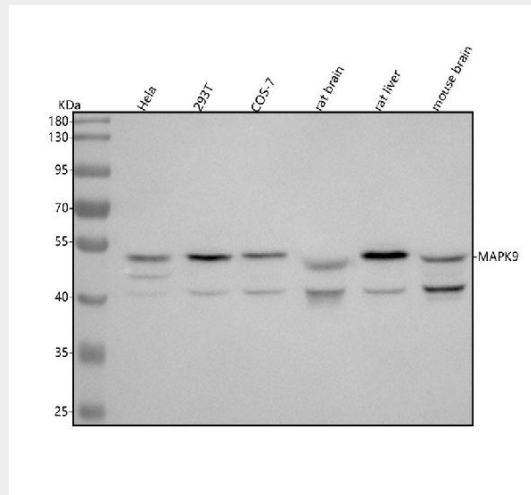


Figure 1. Western blot analysis of MAPK9 using anti-MAPK9 antibody (M02706).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- Lane 1: human Hela whole cell lysates,
- Lane 2: human 293T whole cell lysates,
- Lane 3: monkey COS-7 whole cell lysates,
- Lane 4: rat brain tissue lysates,
- Lane 5: rat liver tissue lysates,
- Lane 6: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MAPK9 antigen affinity purified monoclonal antibody (Catalog # M02706) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MAPK9 at approximately 48 kDa. The expected band size for MAPK9 is at 48 kDa.