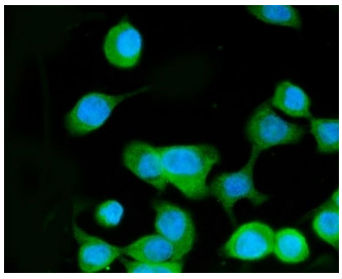
MKK3 Antibody / p38 MAP Kinase Kinase Antibody (R32106)

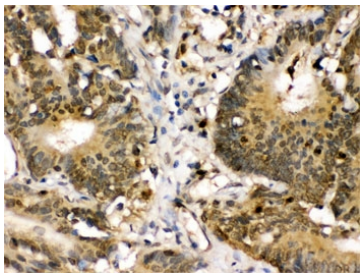
Catalog No.	Formulation	Size
R32106	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

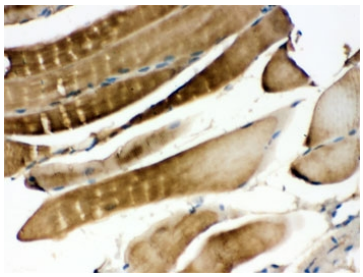
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P46734
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-4ug/ml Immunofluorescence (FFPE): 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This MKK3 Antibody / p38 MAP Kinase Kinase Antibody is available for research use only.



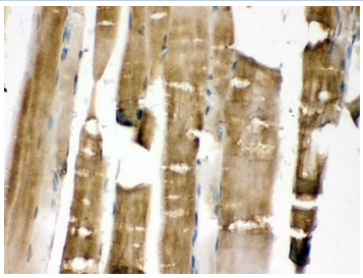
MKK3 Antibody / p38 MAP Kinase Kinase Antibody CACO-2 Immunofluorescence. Immunofluorescent staining of FFPE human CACO-2 cells using MKK3 Antibody / p38 MAP Kinase Kinase Antibody (green) with DAPI nuclear counterstain (blue). Heat-induced epitope retrieval was performed by steaming sections in pH 6.0 citrate buffer for 20 minutes before staining. MKK3 exhibits predominantly cytoplasmic staining, consistent with its function as a dual-specificity kinase that activates p38 MAP kinases in response to inflammatory cytokines, cellular stress, and environmental stimuli. This staining pattern supports the use of the antibody for investigating p38 MAPK signaling, stress-responsive pathways, inflammation, and cancer biology.



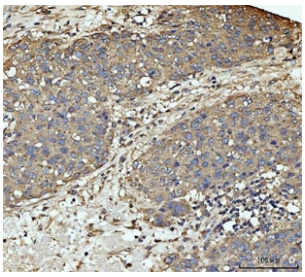
MKK3 Antibody / p38 MAP Kinase Kinase Antibody Human Intestinal Cancer IHC. Immunohistochemical staining of FFPE human intestinal cancer tissue using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. MKK3 expression is detected predominantly within the cytoplasm of tumor cells, consistent with its role as a dual-specificity kinase that activates the p38 MAPK signaling pathway in response to inflammatory cytokines and cellular stress. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6.0 citrate buffer for 20 minutes followed by cooling before staining. Immunoreactivity supports the utility of this antibody for investigating stress-responsive signaling, inflammation, apoptosis, and cancer-associated p38 MAPK activation.



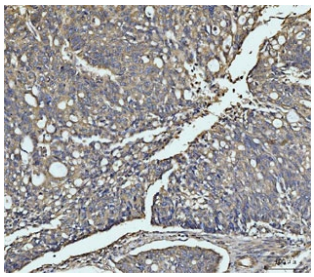
MKK3 Antibody / p38 MAP Kinase Kinase Antibody Mouse Skeletal Muscle IHC. Immunohistochemical staining of FFPE mouse skeletal muscle tissue using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. MKK3 expression is detected throughout skeletal muscle fibers, consistent with its role as a stress-responsive dual-specificity kinase that activates the p38 MAPK signaling pathway involved in muscle differentiation, regeneration, and adaptation to cellular stress. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6.0 citrate buffer for 20 minutes followed by cooling before staining. This staining pattern demonstrates the utility of the antibody for investigating p38 MAPK signaling in skeletal muscle physiology, development, and disease.



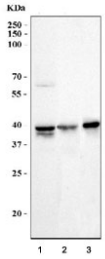
MKK3 Antibody / p38 MAP Kinase Kinase Antibody Rat Skeletal Muscle IHC. Immunohistochemical staining of FFPE rat skeletal muscle tissue using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. MKK3 expression is detected throughout skeletal muscle fibers, consistent with its role as a stress-responsive dual-specificity kinase that activates the p38 MAPK signaling pathway involved in muscle development, regeneration, and cellular adaptation to physiological stress. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6.0 citrate buffer for 20 minutes followed by cooling before staining. This staining pattern supports the use of the antibody for investigating p38 MAPK signaling in skeletal muscle biology and disease.



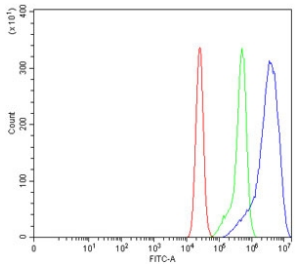
MKK3 Antibody / p38 MAP Kinase Kinase Antibody Human Liver Cancer IHC. Immunohistochemical staining of FFPE human liver cancer tissue using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. MKK3 expression is detected predominantly within the cytoplasm of tumor cells, consistent with its role as a stress-responsive dual-specificity kinase that activates the p38 MAPK signaling pathway in response to inflammatory cytokines and cellular stress. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer for 20 minutes followed by cooling before staining. This staining pattern supports the use of the antibody for investigating p38 MAPK signaling, inflammatory responses, apoptosis, and liver cancer biology.



MKK3 Antibody / p38 MAP Kinase Kinase Antibody Human Ovarian Cancer IHC. Immunohistochemical staining of FFPE human ovarian cancer tissue using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. MKK3 expression is detected predominantly within the cytoplasm of tumor cells, consistent with its function as a stress-responsive dual-specificity kinase that activates the p38 MAPK signaling pathway in response to inflammatory cytokines and environmental stress. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer for 20 minutes followed by cooling before staining. This staining pattern demonstrates the utility of the antibody for investigating p38 MAPK signaling, inflammatory responses, apoptosis, and ovarian cancer biology.l tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



MKK3 Antibody / p38 MAP Kinase Kinase Antibody Multi-Species WB. Western blot analysis of 1) human HeLa, 2) rat kidney, and 3) mouse NIH 3T3 lysates using MKK3 Antibody / p38 MAP Kinase Kinase Antibody. A specific immunoreactive band is detected at approximately 39 kDa in all tested samples, consistent with MKK3 expression. The predicted molecular weight of MKK3 is approximately 39 kDa. These results demonstrate reliable detection of MKK3, a dual-specificity protein kinase that activates the p38 MAPK signaling pathway in response to inflammatory cytokines, environmental stress, and DNA damage, thereby regulating stress-responsive signaling, apoptosis, differentiation, and immune responses.



MKK3 Antibody / p38 MAP Kinase Kinase Antibody CACO-2 Flow Cytometry. Flow cytometric analysis of fixed and permeabilized human CACO-2 cells using MKK3 Antibody / p38 MAP Kinase Kinase Antibody at 1 ug/10^6 cells. Cells were blocked with goat serum prior to staining. Red: cells alone; Green: isotype control; Blue: MKK3 antibody. The distinct rightward shift of the MKK3 antibody population relative to the isotype control demonstrates specific intracellular detection of MKK3, supporting its use for flow cytometric analysis of this stress-responsive kinase involved in p38 MAPK activation, inflammatory signaling, apoptosis, and cellular responses to environmental stress.

Description

MKK3 Antibody / p38 MAP Kinase Kinase Antibody recognizes mitogen-activated protein kinase kinase 3 (MKK3/MAP2K3), a dual-specificity protein kinase that functions as a principal upstream activator of the p38 mitogen-activated protein kinase signaling pathway. MKK3 is activated in response to inflammatory cytokines, environmental stress, DNA damage, osmotic shock, and oxidative stress, where it phosphorylates p38 MAP kinases to regulate cellular responses including inflammation, apoptosis, differentiation, proliferation, and stress adaptation. Because MKK3 occupies a central position within stress-responsive MAPK signaling, MKK3 Antibody / p38 MAP Kinase Kinase Antibody is widely used to investigate inflammatory signaling, oncology, immunology, and cellular stress responses.

MKK3 belongs to the MAP kinase kinase family and selectively activates p38 alpha, beta, gamma, and delta MAP kinases through dual phosphorylation of conserved threonine and tyrosine residues. Activated p38 proteins subsequently regulate numerous downstream kinases and transcription factors involved in cytokine production, cell cycle regulation, immune activation, and programmed cell death. Through this signaling cascade, MKK3 serves as an important molecular relay that converts extracellular stress signals into coordinated changes in gene expression and cellular behavior. Tight regulation of MKK3 activity is therefore essential for maintaining tissue homeostasis and mounting appropriate responses to injury and infection.

Beyond inflammatory signaling, MKK3 contributes to diverse physiological processes including innate immunity, tissue repair, cellular senescence, embryonic development, and metabolic regulation. Activation of the MKK3-p38 pathway influences macrophage activation, epithelial differentiation, angiogenesis, and responses to hypoxia and oxidative damage. Because the pathway integrates signals from numerous receptors and stress-sensing mechanisms, MKK3 has become an important regulator of both normal physiology and disease progression across multiple organ systems.

Aberrant MKK3 signaling has been implicated in numerous pathological conditions including cancer, autoimmune diseases, chronic inflammatory disorders, fibrosis, cardiovascular disease, and neurodegeneration. Dysregulated activation of the p38 MAPK pathway can promote persistent inflammation, abnormal cell survival, or altered responses to cellular stress, making MKK3 an attractive therapeutic target in both inflammatory and neoplastic diseases. Accordingly, MKK3 is frequently studied in drug discovery, biomarker development, and investigations of stress-induced signaling networks.

NSJ Bioreagents' MKK3 Antibody / p38 MAP Kinase Kinase Antibody supports investigations into p38 MAPK signaling, inflammatory cytokine signaling, cellular stress responses, apoptosis, differentiation, innate immunity, cancer biology, and

targeted therapeutic development. Reliable detection of MKK3 enables researchers to study one of the central signaling kinases responsible for linking environmental stress and inflammatory stimuli to downstream transcriptional and cellular responses.

Explore additional antibodies involved in p38 MAPK signaling, stress-responsive kinase pathways, and targeted cancer research on our Cancer Antibodies page.

Application Notes

Optimal dilution of the MKK3 antibody should be determined by the researcher.

Immunogen

Amino acids AERMSYLELMEHPFFTLHKTKKTDIAAFVKEILGEDS of human MAP2K3/MEK3 were used as the immunogen for the MKK3 antibody.

Storage

After reconstitution, the MKK3 Antibody / p38 MAP Kinase Kinase Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MKK3 antibody, MAP2K3 antibody, Mitogen-Activated Protein Kinase Kinase 3 antibody, p38 MAP Kinase Kinase antibody, Stress-Activated Kinase antibody, Dual Specificity Kinase antibody

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