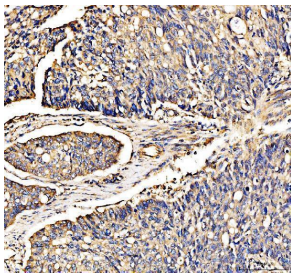
MEK3 Antibody / MAP2K3 / MKK3 (R30446)

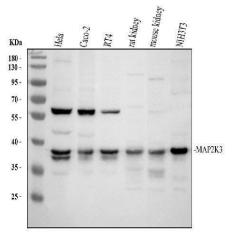
Catalog No.	Formulation	Size
R30446	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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): 2-5ug/ml
Limitations	This MEK3 antibody is available for research use only.



MEK3 Antibody / p38 MAP Kinase Kinase Antibody Human Colon Cancer IHC. Immunohistochemical staining of FFPE human colon cancer tissue using MEK3 Antibody / p38 MAP Kinase Kinase Antibody. MEK3 expression is detected predominantly within the cytoplasm of tumor cells, consistent with its role as a dual-specificity kinase that activates p38 MAP kinases in response to cellular stress, inflammatory cytokines, and environmental stimuli. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with the primary antibody (2 ug/ml) overnight at 4Â°C, followed by a peroxidase-conjugated goat anti-rabbit IgG secondary antibody. Immunoreactivity was visualized using an HRP Super Vision detection system with DAB as the chromogen.Expected/observed molecular weight ~39 kDa.



MEK3 Antibody / p38 MAP Kinase Kinase Antibody Multi-Species WB. Western blot analysis of 1) human HeLa, 2) human CACO-2, 3) human RT4, 4) rat kidney, 5) mouse kidney, and 6) mouse NIH/3T3 lysates using MEK3 Antibody / p38 MAP Kinase Kinase Antibody. A specific immunoreactive band is detected at approximately 39 kDa in all tested samples, consistent with MEK3 (MAP2K3) expression. The predicted molecular weight of MEK3 is approximately 39 kDa. These results demonstrate reliable detection of MEK3, a dual-specificity protein kinase that phosphorylates and activates p38 MAP kinases in response to cellular stress, inflammatory cytokines, and environmental stimuli, thereby regulating inflammatory signaling, apoptosis, differentiation, and stress-responsive gene expression.

Description

MEK3 Antibody recognizes mitogen-activated protein kinase kinase 3 (MEK3/MAP2K3), a dual-specificity protein kinase that serves as a principal upstream activator of the p38 mitogen-activated protein kinase signaling pathway. MEK3 is activated in response to inflammatory cytokines, oxidative stress, ultraviolet radiation, DNA damage, osmotic stress, and other environmental stimuli, where it phosphorylates p38 MAP kinases to regulate inflammation, apoptosis, differentiation, proliferation, and cellular adaptation. Because MEK3 occupies a central role in stress-responsive MAPK signaling, MEK3 Antibody is widely used to investigate inflammatory signaling, innate immunity, oncology, and cellular stress responses.

MEK3 belongs to the MAP kinase kinase family and selectively activates p38 alpha, beta, gamma, and delta MAP kinase isoforms through dual phosphorylation of conserved threonine and tyrosine residues. Activated p38 proteins subsequently regulate numerous downstream kinases and transcription factors involved in cytokine production, immune activation, apoptosis, cell cycle regulation, and stress-induced gene expression. Through this signaling cascade, MEK3 functions as an essential molecular relay that converts extracellular stress signals into coordinated transcriptional and cellular responses required for tissue homeostasis and adaptation to environmental challenges.

Beyond inflammatory signaling, MEK3 contributes to diverse physiological processes including innate immune responses, macrophage activation, skeletal muscle differentiation, angiogenesis, tissue repair, embryonic development, and metabolic regulation. The MEK3-p38 signaling axis also participates in cellular senescence, responses to hypoxia, oxidative injury, and host defense against infection. Because MEK3 integrates signals from multiple receptors and intracellular stress pathways, it serves as a critical regulator of normal physiology across numerous tissues and organ systems.

Aberrant MEK3 signaling has been implicated in numerous pathological conditions including cancer, autoimmune diseases, chronic inflammatory disorders, fibrosis, cardiovascular disease, metabolic dysfunction, and neurodegenerative disorders. Persistent activation of the p38 MAPK pathway can promote pathological inflammation and abnormal cellular responses to stress, making MEK3 an attractive therapeutic target in both inflammatory and neoplastic diseases. NSJ Bioreagents' MEK3 Antibody supports investigations into p38 MAPK signaling, inflammatory cytokine signaling, apoptosis, differentiation, innate immunity, stress-responsive pathways, and targeted therapeutic development. Reliable detection of MEK3 enables researchers to study one of the central signaling kinases linking environmental stress with downstream cellular responses.

Learn more about the biological functions, applications, and validated products on our MKK3 Antibody / p38 MAP Kinase Kinase Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the MEK3 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human MEK3 (MEHPFFTLHKTKKTD) was used as the immunogen for

this MEK3 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the MEK3 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

MEK3 antibody, MAP2K3 antibody, MKK3 antibody, Mitogen-Activated Protein Kinase Kinase 3 antibody, p38 MAP Kinase Kinase antibody, Stress-Activated Kinase antibody

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