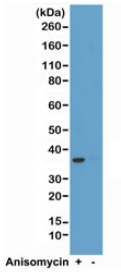
Recombinant phospho-p38 Antibody (Thr180/Tyr182) [clone RM243] (R20264)

Catalog No.	Formulation	Size
R20264-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

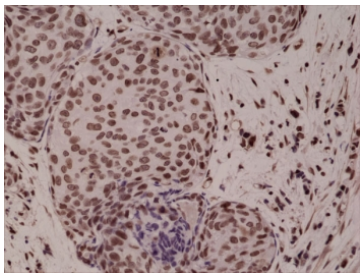
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM243
Purity	Protein A purified from animal origin-free supernatant
UniProt	Q16539
Gene ID	1432
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1:500-1:1000 (1) Western Blot : 1:1000-1:2000
Limitations	This recombinant phospho-p38 antibody is available for research use only.



Western blot test of HeLa cell lysate, treated or untreated with anisomycin, using recombinant phospho-p38 antibody at 1:2000.



IHC testing of FFPE human breast cancer tissue with recombinant phospho-p38 antibody at 1:1000.

Description

The Recombinant phospho-p38 antibody is a recombinant reagent engineered to detect p38 mitogen-activated protein kinase (MAPK) only when it is dually phosphorylated at threonine 180 (pThr180) and tyrosine 182 (pTyr182). p38 MAPK is a member of the stress-activated kinase family that plays a central role in regulating cellular responses to environmental stress, cytokines, and growth factors. Activation of p38 requires phosphorylation at these two adjacent residues within the activation loop, a modification that induces conformational changes necessary for catalytic activity. The Recombinant phospho-p38 antibody provides strict specificity for this activated form, enabling researchers to study p38 signaling with precision.

The p38 MAPK family consists of four isoforms: p38ÃŽÂ±, p38ÃŽÂ², p38ÃŽÂ³, and p38ÃŽÂ´, with p38ÃŽÂ± being the best studied. These kinases regulate processes such as inflammation, apoptosis, cell differentiation, and cytokine production. Dual phosphorylation at Thr180 and Tyr182 is catalyzed by upstream kinases MKK3 and MKK6 in response to diverse stimuli, including UV radiation, oxidative stress, osmotic shock, and pro-inflammatory cytokines like TNF-ÃŽÂ± and IL-1. The Recombinant phospho-p38 antibody specifically detects this phosphorylation event, distinguishing active p38 from its inactive counterpart.

In western blotting, the Recombinant phospho-p38 antibody identifies phosphorylated p38 as an inducible band that appears following stress or cytokine stimulation. In immunofluorescence, it reveals nuclear or cytoplasmic localization of activated p38, depending on cell type and stimulus. In immunohistochemistry, the antibody highlights phosphorylated p38 in tissue samples subjected to inflammatory or stress conditions, supporting studies in pathology and translational research. Recombinant expression ensures consistent performance between lots, reducing variability compared with traditional polyclonal antibodies.

Activated p38 MAPK is central to inflammatory signaling, where it controls expression of cytokines and enzymes such as COX-2. It also participates in apoptosis and cell cycle arrest, linking stress responses to cell fate decisions. Dysregulation of p38 signaling has been implicated in cancer, autoimmune disease, and cardiovascular pathology. The Recombinant phospho-p38 antibody enables researchers to track these phosphorylation events in health and disease. Synonym phrases such as recombinant dual phospho-p38 antibody and recombinant pThr180/pTyr182 p38 antibody broaden product discoverability for diverse users.

By offering validated and reproducible detection, the Recombinant phospho-p38 antibody strengthens analysis of MAPK signaling pathways. NSJ Bioreagents ensures rigorous quality control for this reagent, giving researchers confidence in applications including western blotting, immunofluorescence, and immunohistochemistry. With its specificity for dual phosphorylation at Thr180 and Tyr182, the Recombinant phospho-p38 antibody is an indispensable tool for studying stress-activated signaling and inflammatory responses.

This recombinant phospho-p38 antibody reacts to p38 MAPK only when dual phosphorylation at Thr180 and Tyr182 is observed. There is no cross-reactivity with p38 MAPK without dual phosphorylation at Thr180 and Tyr182.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant phospho-p38 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A phospho-peptide corresponding to human phospho-p38 MAPK (Thr180/Tyr182) was used as the immunogen for this recombinant phospho-p38 antibody.

Storage

Store the recombinant phospho-p38 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).