Data Sheet (Cat.No.TMAY-01511)

TargetMol

Anti-Phospho-p38 MAPK (Thr180, Tyr182) Antibody (2X628)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human; Predicted to React with:Phospho-p38 MAPK (Thr180, Tyr182)
Conjugation:	Unconjugated
Clone:	2X628
Purification:	Protein A

Applications

Verified Activity:	1. Immunohistochemical analysis of paraffin-embedded human carcinoma of sigmoid tissue, untreated (left) or lambda phosphatase-treated (right), using Recombinant Phospho-p38 MAPK (Thr180-Tyr182) Antibody, Rabbit Monoclonal at 1:500 dilution. 2. Immunofluorescence staining of Phospho-p38 MAPK (Thr180, Tyr182) in serum-starved NIH-3T3 cells, untreated (left), treated with UV (30mins) (middle) or treated with UV (30mins) and lambda phosphatase (right). Cells were fixed with 4% PFA, permeabilzed with 0.1% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Mouse Phospho-p38 MAPK (Thr180, Tyr182) monoclonal antibody (dilution ratio 1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor®488-conjugated Goat Anti-rabbit IgG secondary antibody (green). Positive staining was mainly localized to Nucleus. 3. Western blot analysis of extracts from serum-starved NIH-3T3, untreated(line A) or treated with UV (30min; +)(line B), using Phospho-p38 MAPK (Thr180, Tyr182) rabbit monoclonal Antibody at 1:1000 dilution (upper) or Anti-Actin Antibody, Chimeric Rabbit Monoclonal at 1: 50000 dilution (lower). 4. Western blot analysis of extracts from serum-starved NIH-3T3, untreated (line A); treated with UV (30min; +) (line B); treated with UV and λ-phosphatase (line C) using Phospho-p38 MAPK (Thr180, Tyr182) rabbit monoclonal Antibody at 1:1000 dilution. (Validation Experiment) 5. Western blot analysis of extracts from serum-starved NIH-3T3, untreated (line A); treated with UV (30min), without peptide (line B) or antigen-specific phosphopeptide (line C) or antigen-specific peptide (line D) using Phospho-p38 MAPK (Thr180, Tyr182) rabbit monoclonal Antibody at 1:1000 dilution. (Validation Experiment)
Application:	ICC/IF,IHC-P,WB
Recommended	WB: 1:1000-1:10000; IHC-P: 1:200-1:1000; ICC-IF: 1:20-1:100

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: residues around Thr180, Tyr182 of human Phospho-p38 MAPK.
Antigen Species:	Human
Synonyms:	RK;p38ALPHA;Phospho-p38 MAPK (T180, Y182);PRKM14;p-p38 MAPK (Thr180, Tyr182);p38; EXIP;CSBP;p-p38 MAPK (T180, Y182);SAPK2A;Csbp2;p38 MAPK (p-Thr180, Tyr182);Mxi2;CSPB1; PRKM15;Csbp1;p38 MAPK (p-T180, Y182)

Research Background

MAPK14 contains 1 protein kinase domain and belongs to the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation, and development. MAPK14 can be detected in the brain, heart, placenta, pancreas, and skeletal muscle and it is expressed to a lesser extent in the lung, liver, and kidney. MAPK14 is activated by various environmental stresses and proinflammatory cytokines. The activation requires its phosphorylation by MAP kinase kinases (MKKs), or its autophosphorylation triggered by the interaction of MAP3K7IP1/TAB1 protein with MAPK14. The substrates of p38 alpha include transcription regulator ATF2, MEF2C, and MAX, cell cycle regulator CDC25B, and tumor suppressor p53, which suggest the roles of p38 alpha in stress-related transcription and cell cycle regulation, as well as in genotoxic stress response. In response to activation by environmental stress, pro-inflammatory cytokines, and lipopolysaccharide, MAPK14 phosphorylates some transcription factors, such as ELK1 and ATF2, and several downstream kinases, such as MAPKAPK2 and MAPKAPK5. MAPK14 plays a critical role in the production of some cytokines, for example, IL-6. It may play a role in the stabilization of EPO mRNA during hypoxic stress. Isoform Mxi2 activation is stimulated by mitogens and oxidative stress and only poorly phosphorylates ELK1 and ATF2.

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