Data Sheet (Cat.No.TMAH-00729)

Anti-MAPK10 Antibody (5A148)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Mouse
Conjugation:	Unconjugated
Clone:	5A148
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: PC-3 whole cell lysate, Mouse brain tissue -All lanes: MAPK10 antibody at 1:2000 -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 53, 49, 32kDa -Observed band size: 55 kDa 2. IHC image of TMAH-00729 diluted at 1:100 and staining in paraffin-embedded human brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB. 3. Immunofluorescence staining of PC-3 cell with TMAH-00729 at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 553-congugated AffiniPure Goat Anti-Rabbit IgG(H+L). 4. Overlay Peak curve showing PC3 cells stained with TMAH-00729 (red line) at 1:100. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^6 cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C.Control antibody (green line) was rabbit IgG (1ug/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA, WB, IHC, IF, FCM
Recommended	WB:1:500-1:2000; IHC:1:50-1:200; IF:1:50-1:200; FCM:1:50-1:200.

Properties

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

Antigen Details

Immunogen:	A synthetic peptide: Human MAPK10
Antigen Species:	Human
Gene ID:	5602
Uniprot ID:	P53779
Synonyms:	Mitogen-activated protein kinase 10;Stress-activated protein kinase 1b;EC 2.7.11.24;SAPK1b; JNK3A;c-Jun N-terminal kinase 3;JNK3;PRKM10;MAP kinase 10;MAPK 10;Stress-activated protein kinase JNK3;MAP kinase p49 3F12
Biology Area:	Cancer, Immunology, Signal transduction

Research Background

Serine/threonine-protein kinase involved in various processes such as neuronal proliferation, differentiation, migration and programmed cell death. Extracellular stimuli such as proinflammatory 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 MAPK10/JNK3. In turn, MAPK10/JNK3 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. Plays regulatory roles in the signaling pathways during neuronal apoptosis. Phosphorylates the neuronal microtubule regulator STMN2. Acts in the regulation of the amyloid-beta precursor protein/APP signaling during neuronal differentiation by phosphorylating APP. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the photic regulation of the circadian clock. Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1.