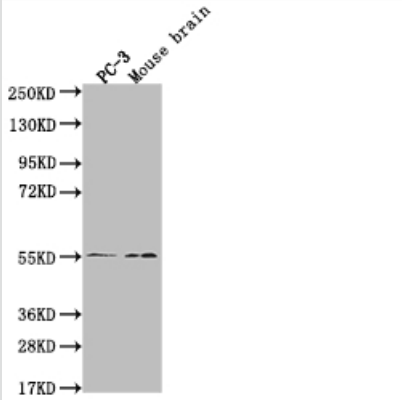
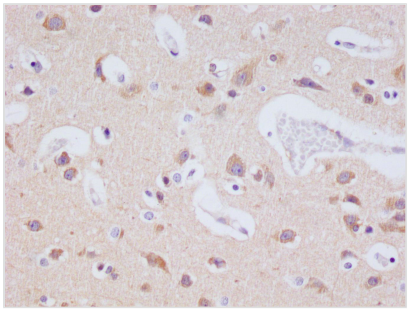
MAPK10 Recombinant Monoclonal Antibody

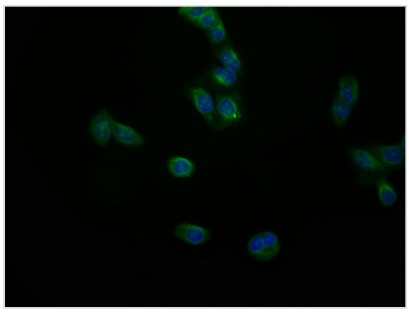
Product Code	CSB-RA240216A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P53779
Immunogen	A synthesized peptide derived from human MAPK10
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, IHC, IF, FC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200, IF:1:50-1:200, FC:1:50-1:200
Relevance	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 (PubMed:22441692). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:22327296). {ECO:0000269|PubMed:11718727, ECO:0000269|PubMed:22327296, ECO:0000269|PubMed:22441692}.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Immunology; Signal transduction
Gene Names	MAPK10
Clone No.	29E10
Image	



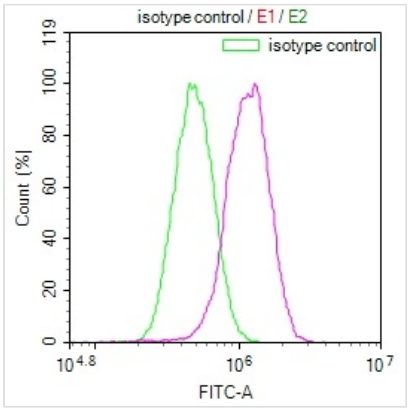
Western Blot
Positive WB detected in: PC-3 whole cell lysate, Mouse brain tissue
All lanes: MAPK10 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 53, 49, 32kDa
Observed band size: 55 kDa



IHC image of CSB-RA240216A0HU 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.



Immunofluorescence staining of PC-3 cell with CSB-RA240216A0HU 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).



Overlay Peak curve showing PC3 cells stained with CSB-RA240216A0HU (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*10^6cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1ug/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The generation of the MAPK10 recombinant monoclonal antibody is a carefully executed process, designed to ensure its quality and specificity. Initially, B cells are isolated from an immunized animal, with the a synthesized peptide derived from human MAPK10 used as the immunogen. Subsequently, total RNA is

extracted from the isolated B cells and converted into cDNA through reverse transcription. The MAPK10 antibody genes are then amplified using PCR with specific primers that target the antibody constant regions, followed by their insertion into an expression vector. The expression vector is introduced into host cells, allowing for the production of the MAPK10 recombinant monoclonal antibody. The antibody is harvested from the cell culture supernatant and subjected to affinity chromatography for purification, resulting in a highly purified form. To confirm its specificity and functionality, the antibody undergoes extensive characterization assays, including ELISA, WB, IHC, IF, and FC analysis, ensuring its precise recognition of human and mouse MAPK10 proteins.