Data Sheet (Cat.No.TMAY-00228)

TargetMol

Anti-MAPK14 Antibody (4C267)

Product Details

Ig Type:	mouse IgG2a
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4C267
Purification:	Protein A

Applications

Verified Activity:	1. Immunochemical staining of human MAPK14 in human brain with mouse monoclonal antibody (1:100, formalin-fixed paraffin embedded sections). 2. Immunochemical staining of human MAPK14 in human placenta with mouse monoclonal antibody (1:100, formalin-fixed paraffin embedded sections). 3. Immunochemical staining of human MAPK14 in human stomach with mouse monoclonal antibody (1:100, formalin-fixed paraffin embedded sections). 4. Anti-MAPK14 mouse monoclonal antibody at 1:500 dilution. -Lane A: Jurkat Whole Cell Lysate. -Lane B: A431 Whole Cell Lysate. -Lane C: MCF7 Whole Cell Lysate. -Lane D: HepG2 Whole Cell lysate. -Lysates/proteins at 30 µg per lane. -Secondary -Goat Anti-Mouse IgG (H+L)/HRP at 1/10000 dilution. -Developed using the ECL technique. -Performed under reducing conditions. -Predicted band size:41 kDa. -Observed band size:41 kDa(We are unsure as to the identity of these extra bands.) 5. Immunofluorescence staining of MAPK14 in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 0.1% Triton X-100 in PBS,blocked with 10% serum, and incubated with mouse anti-human MAPK14 monoclonal antibody (dilution ratio 1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor®488-conjugated Goat Anti-mouse IgG secondary antibody (green) and counterstained with DAPI (blue).Positive staining was localized to Nucleus.
Application:	ELISA,ICC/IF,IHC-P,WB
Recommended	WB: 1:500-1:2000; ELISA: 1:1000-1:2000; IHC-P: 1:50-1:200; 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: Recombinant Protein: Human p38 alpha/MAPK14 Protein

Antigen Species: Human

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.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481