Data Sheet (Cat.No.TMAH-00725)

Anti-MAP2K1 Antibody (8N866)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Rat
Conjugation:	Unconjugated
Clone:	8N866
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: Hela whole cell lysate, 293 whole cell lysate, MCF-7 whole cell lysate, 293T whole cell lysate, A549 whole cell lysate, U251 whole cell lysate, Rat brain tissue -All lanes: MAP2K1 antibody at 1:2000 -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 44, 41 kDa -Observed band size: 44 kDa 2. IHC image of TMAH-00725 diluted at 1:100 and staining in paraffin-embedded human glioma cancer 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 IgG polymer labeled by HRP and visualized using 0.05% DAB. 3. Immunoprecipitating MAP2K1 in Hela whole cell lysate -Lane 1: Rabbit control IgG instead of TMAH-00725 in Hela whole cell lysate. For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000) -Lane 2: TMAH-00725(2μg)+ Hela whole cell lysate(500μg) -Lane 3: Hela whole cell lysate (10μg)
Application:	ELISA,IHC,IP,WB
Recommended	WB:1:500-1:5000; IHC:1:50-1:200; IP:1:200-1:1000.

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 MEK1
Antigen Species:	Human
Gene ID:	5604
Uniprot ID:	Q02750
Synonyms:	EC 2.7.12.2;PRKMK1;ERK activator kinase 1;Dual specificity mitogen-activated protein kinase kinase 1;MEK 1;MAP kinase kinase 1;MAPK/ERK kinase 1;MAPKK 1;MKK1
Biology Area:	Signal transduction

Research Background

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Activates BRAF in a KSR1 or KSR2-dependent manner; by binding to KSR1 or KSR2 releases the inhibitory intramolecular interaction between KSR1 or KSR2 protein kinase and N-terminal domains which promotes KSR1 or KSR2-BRAF dimerization and BRAF activation. Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis.