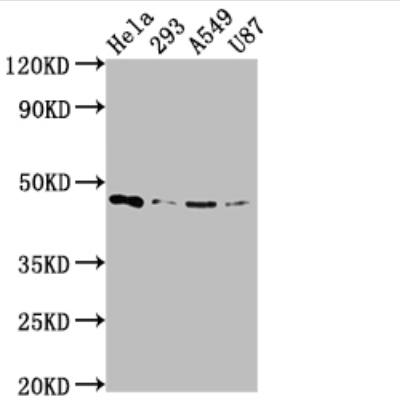
MAP2K1 Recombinant Monoclonal Antibody

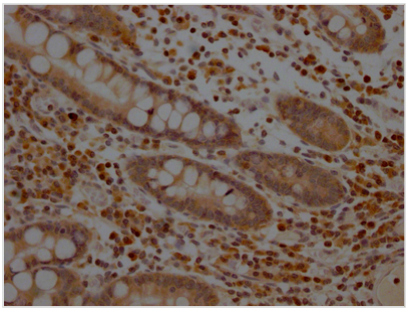
Product Code	CSB-RA225579A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q02750
Immunogen	A synthesized peptide derived from human MEK1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IP:1:200-1:1000
Relevance	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. 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.
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	Signal transduction
Gene Names	MAP2K1

Clone No. 3F10

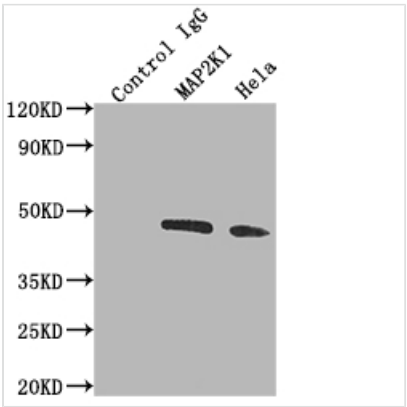
Image



Western Blot
Positive WB detected in: Hela whole cell lysate, 293 whole cell lysate, A549 whole cell lysate, U87 whole cell lysate
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



IHC image of CSB-RA225579A0HU diluted at 1:100 and staining in paraffin-embedded human colon 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? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunoprecipitating MAP2K1 in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA225579A0HU in Hela whole cell lysate. For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA225579A0HU(2μg)+ Hela whole cell lysate(500μg)
Lane 3: Hela whole cell lysate (10μg)

Description

CUSABIO employed a human MAP2K1-derived peptide to immunize an animal, stimulating an immune response. Following immunization, B cells were isolated from the animal and fused with myeloma cells, resulting in the creation of hybridoma cells. From these cells, a single hybridoma clone producing the desired MAP2K1-specific antibody was carefully screened and selected. RNA was subsequently extracted from the chosen hybridoma clone, and the MAP2K1 antibody-encoding genes were specifically amplified using reverse transcription PCR techniques. These amplified genes were then successfully cloned into an expression vector, which was subsequently introduced into a host system for efficient expression. Through affinity chromatography, the resulting MAP2K1 recombinant monoclonal antibodies were purified from the cell culture supernatant. Rigorous validation, employing ELISA, WB, IHC, and IP

techniques, confirmed the binding specificity and affinity of the recombinant monoclonal MAP2K1 antibody, which notably recognizes human MAP2K1 protein.