

**Anti-MKK1 (pT292) Antibody**  
Rabbit polyclonal antibody to MKK1 (pT292)  
Catalog # AP59675

## Specification

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### Anti-MKK1 (pT292) Antibody - Product Information

Application	WB, IF
Primary Accession	<a href="#">Q02750</a>
Reactivity	Human, Rabbit, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43439

### Anti-MKK1 (pT292) Antibody - Additional Information

Gene ID 5604

#### Other Names

MEK1; PRKMK1; Dual specificity mitogen-activated protein kinase kinase 1; MAP kinase kinase 1; MAPKK 1; MKK1; ERK activator kinase 1; MAPK/ERK kinase 1; MEK 1

#### Target/Specificity

Recognizes endogenous levels of MKK1 (pT292) protein.

#### Dilution

WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500)  
IF~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500)

#### Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

### Anti-MKK1 (pT292) Antibody - Protein Information

Name MAP2K1 ([HGNC:6840](#))

Synonyms MEK1, PRKMK1

#### Function

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 (PubMed:<a href="http://www.uniprot.org/citations/29433126" target="\_blank">29433126</a>). 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.

#### Cellular Location

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus Membrane; Peripheral membrane protein. Note=Localizes at centrosomes during prometaphase, midzone during anaphase and midbody during telophase/cytokinesis (PubMed:14737111). Membrane localization is probably regulated by its interaction with KSR1 (PubMed:10409742)

#### Tissue Location

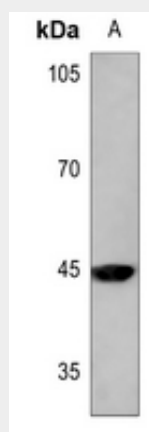
Widely expressed, with extremely low levels in brain.

#### Anti-MKK1 (pT292) Antibody - Protocols

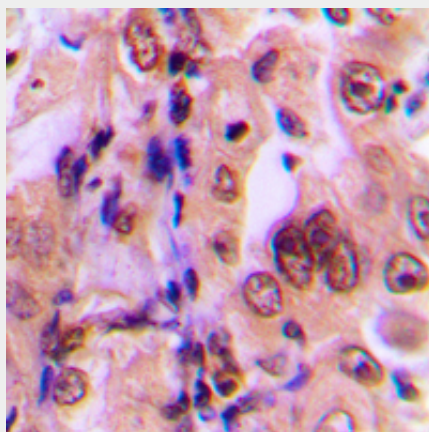
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

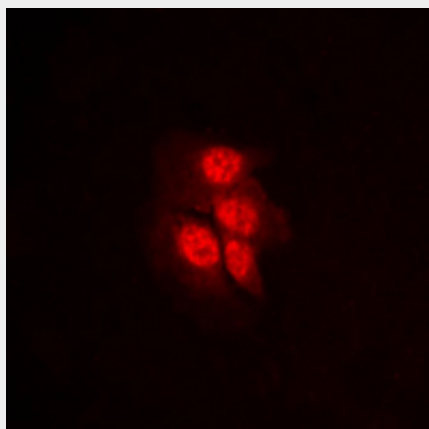
#### Anti-MKK1 (pT292) Antibody - Images



Western blot analysis of MKK1 (pT292) expression in A375 (A) whole cell lysates.



Immunohistochemical analysis of MKK1 (pT292) staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of MKK1 (pT292) staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

#### **Anti-MKK1 (pT292) Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human MKK1. The exact sequence is proprietary.