

## Anti-Phospho-MAP2K1 (Thr292) Antibody (7K602)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7K602
Purification:	Affinity-chromatography

## Applications

Western Blot	-Positive WB detected in Hela whole cell lysate
Verified Activity:	-All lanes Phospho-MAP2K1 antibody at 1.645µg/ml
	-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
	-Predicted band size: 45 KDa
	-Observed band size: 45 KDa
Application:	ELISA,WB
Recommended	WB:1:500-1:5000.

## 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 Phospho-MAP2K1 (T292)
Antigen Species:	Human
Gene ID:	5604
Uniprot ID:	Q02750
Synonyms:	MAP kinase kinase 1;EC 2.7.12.2;p-MAP2K1 (Thr292);PRKMK1;MAPKK 1;Phospho-MAP2K1 (T292);MAP2K1 (p-T292);p-MAP2K1 (T292);ERK activator kinase 1;Dual specificity mitogen-activated protein kinase kinase 1;MKK1;MEK 1;MAP2K1 (p-Thr292);MAPK/ERK kinase 1
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

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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.

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