

MAP2K7 (Phospho-Thr275) Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52516

Specification

MAP2K7 (Phospho-Thr275) Antibody - Product Information

Application	WB
Primary Accession	O14733
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47485

MAP2K7 (Phospho-Thr275) Antibody - Additional Information

Gene ID 5609

Other Names

Dual specificity mitogen-activated protein kinase kinase 7, MAP kinase kinase 7, MAPKK 7, JNK-activating kinase 2, MAPK/ERK kinase 7, MEK 7, Stress-activated protein kinase kinase 4, SAPK kinase 4, SAPKK-4, SAPKK4, c-Jun N-terminal kinase kinase 2, JNK kinase 2, JNKK 2, MAP2K7, JNKK2, MEK7, MKK7, PRKMK7, SKK4

Dilution

WB~~1:1000

Format

Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

Storage Conditions

-20°C

MAP2K7 (Phospho-Thr275) Antibody - Protein Information

Name MAP2K7

Synonyms JNKK2, MEK7, MKK7, PRKMK7, SKK4

Function

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K4/MKK4, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4/MKK4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The monophosphorylation of JNKs on the Thr residue is sufficient to increase

JNK activity indicating that MAP2K7/MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Has a specific role in JNK signal transduction pathway activated by pro-inflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Part of a non-canonical MAPK signaling pathway, composed of the upstream MAP3K12 kinase and downstream MAP kinases MAPK1/ERK2 and MAPK3/ERK1, that enhances the AP-1-mediated transcription of APP in response to APOE ([PubMed:28111074](http://www.uniprot.org/citations/28111074)).

Cellular Location

Nucleus. Cytoplasm.

Tissue Location

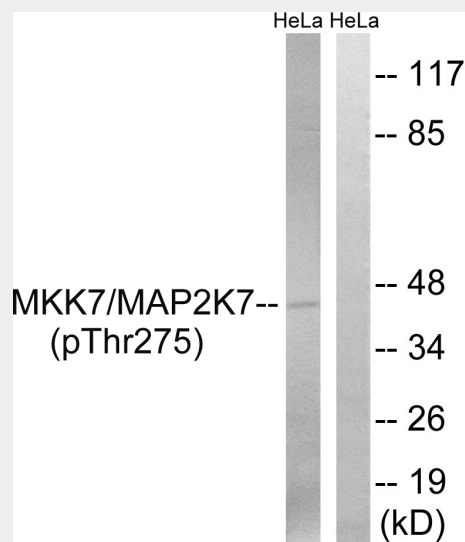
Ubiquitous; with highest level of expression in skeletal muscle. Isoform 3 is found at low levels in placenta, fetal liver, and skeletal muscle.

MAP2K7 (Phospho-Thr275) Antibody - Protocols

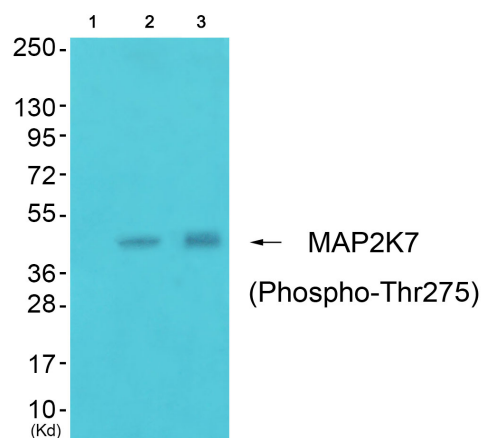
Provided below are standard protocols that you may find useful for product applications.

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

MAP2K7 (Phospho-Thr275) Antibody - Images



Western blot analysis of extracts from HeLa cells, treated with calyculinA (50ng/ml, 30mins), using MAP2K7 (Phospho-Thr275) antibody.



Western blot analysis of extracts from cos-7 cells (Lane 2) and 3T3 cells (Lane 3), using MAP2K7 (Phospho-Thr275) Antibody. The lane on the left is treated with synthesized peptide.

MAP2K7 (Phospho-Thr275) Antibody - Background

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K4/MKK4, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4/MKK4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The monophosphorylation of JNKs on the Thr residue is sufficient to increase JNK activity indicating that MAP2K7/MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Has a specific role in JNK signal transduction pathway activated by proinflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis.

MAP2K7 (Phospho-Thr275) Antibody - References

- Wu Z.,et al.Mol. Cell. Biol. 17:7407-7416(1997).
- Lu X.,et al.J. Biol. Chem. 272:24751-24754(1997).
- Foltz I.N.,et al.J. Biol. Chem. 273:9344-9351(1998).
- Michael L.,et al.Biochem. Biophys. Res. Commun. 341:679-683(2006).
- Yang J.,et al.Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.