

# MAP2K7 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AW5572

## **Product Information**

| Application       | WB                    |
|-------------------|-----------------------|
| Primary Accession | <u>014733</u>         |
| Other Accession   | <u>Q8CE90, Q4KSH7</u> |
| Reactivity        | Human                 |
| Predicted         | Dog, Chicken          |
| Host              | Rabbit                |
| Clonality         | Polyclonal            |
| Calculated MW     | 47485                 |
| Isotype           | Rabbit IgG            |
| Antigen Source    | HUMAN                 |

#### **Additional Information**

| Gene ID            | 5609   |
|--------------------|--|
| Antigen Region     | 343-376  |
| Other Names        | Dual specificity mitogen-activated protein kinase kinase 7, MAP kinase kinase<br>7, MAPKK 7, JNK-activating kinase 2, MAPK/ERK kinase 7, MEK 7,<br>Stress-activated protein kinase kinase 4, SAPK kinase 4, SAPKK-4, SAPKK4,<br>c-Jun N-terminal kinase kinase 2, JNK kinase 2, JNKK 2, MAP2K7, JNKK2, MEK7,<br>MKK7, PRKMK7, SKK4 |
| Dilution           | WB~~1:2000   |
| Target/Specificity | This MAP2K7 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 343-376 amino acids of human MAP2K7.   |
| Format             | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.<br>This antibody is purified through a protein A column, followed by peptide<br>affinity purification.   |
| Storage            | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.  |
| Precautions        | MAP2K7 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.   |

## **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 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). |
| 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.  |

## 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.

### 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.

### Images



All lanes : Anti-MAP2K7 Antibody (C-Term) at 1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: Ramos whole cell lysate Lane 4: THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.