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# MAP2K4 Antibody
**Purified Mouse Monoclonal Antibody**
**Catalog # AO1520a**

## Specification

## MAP2K4 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC, FC, E** |
| Primary Accession | P45985 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **IgG1** |
| Calculated MW | **42kDa KDa** |

**Description**
This gene encodes a dual specificity protein kinase that belongs to the Ser/Thr protein kinase family. This kinase is a direct activator of MAP kinases in response to various environmental stresses or mitogenic stimuli. It has been shown to activate MAPK8/JNK1, MAPK9/JNK2, and MAPK14/p38, but not MAPK1/ERK2 or MAPK3/ERK3. This kinase is phosphorylated, and thus activated by MAP3K1/MEKK. The knockout studies in mice suggested the roles of this kinase in mediating survival signal in T cell development, as well as in the organogenesis of liver.Tissue specificity: Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues .

**Immunogen**
Purified recombinant fragment of human MAP2K4 expressed in E. Coli.

**Formulation**
Ascitic fluid containing 0.03% sodium azide.

## MAP2K4 Antibody - Additional Information

**Gene ID** 6416

**Other Names**
Dual specificity mitogen-activated protein kinase kinase 4, MAP kinase kinase 4, MAPKK 4, 2.7.12.2, JNK-activating kinase 1, MAPK/ERK kinase 4, MEK 4, SAPK/ERK kinase 1, SEK1, Stress-activated protein kinase kinase 1, SAPK kinase 1, SAPKK-1, SAPKK1, c-Jun N-terminal kinase kinase 1, JNKK, MAP2K4, JNKK1, MEK4, MKK4, PRKMK4, SEK1, SERK1, SKK1

**Dilution**
WB~~1/500 - 1/2000
IHC~~1/500 - 1/2000
FC~~1/200 - 1/400
E~~1/10000

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
MAP2K4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## MAP2K4 Antibody - Protein Information

**Name** MAP2K4

**Synonyms** JNKK1, MEK4, MKK4, PRKMK4, SEK1, SERK1,

**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 MAP2K7/MKK7, 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 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to pro-inflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14.

**Cellular Location**
Cytoplasm. Nucleus.

**Tissue Location**
Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues

## MAP2K4 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 Cytomety
- Cell Culture

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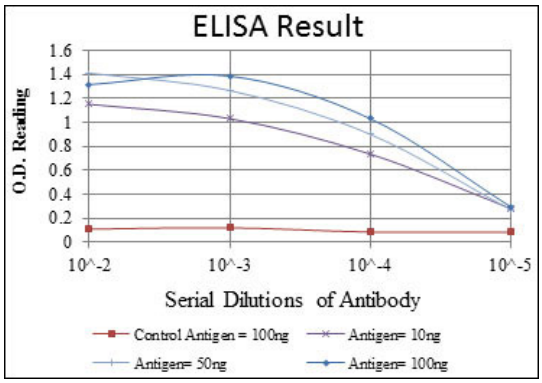


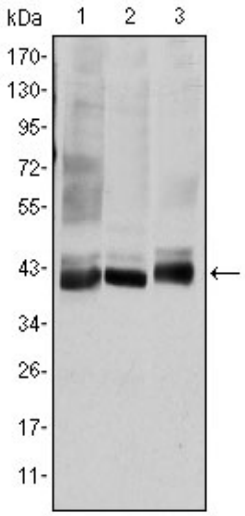


Figure 1: Western blot analysis using MAP2K4 mouse mAb against HepG2 (1), K562 (2), and HEK293 (3) cell lysate.

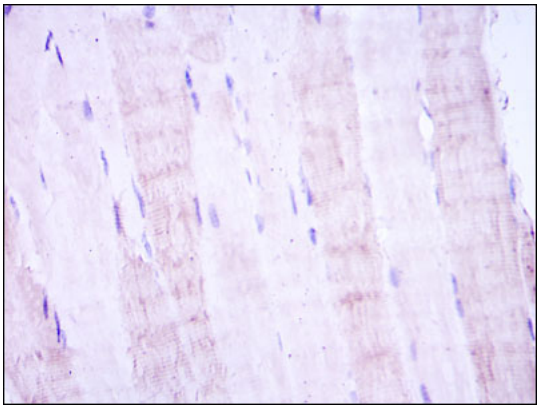

Figure 2: Immunohistochemical analysis of paraffin-embedded muscle tissues using MAP2K4 mouse mAb with DAB staining.

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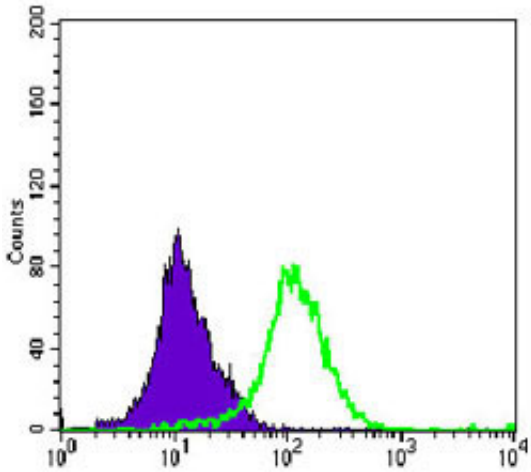


Figure 3: Flow cytometric analysis of K562 cells using MAP2K4 mouse mAb (green) and negative control (purple).

## MAP2K4 Antibody - References

1. J Biol Chem. 2009 Jan 2;284(1):685-95. 2. J Immunol. 2008 Sep 1;181(5):3252-8.