

**MEKK4 Antibody (Center C1081) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP14786c****Specification**

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**MEKK4 Antibody (Center C1081) Blocking Peptide - Product Information**Primary Accession [Q9Y6R4](#)**MEKK4 Antibody (Center C1081) Blocking Peptide - Additional Information****Gene ID** 4216**Other Names**

Mitogen-activated protein kinase kinase kinase 4, MAP three kinase 1, MAPK/ERK kinase kinase 4, MEK kinase 4, MEKK 4, MAP3K4, KIAA0213, MAPKKK4, MEKK4, MTK1

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**MEKK4 Antibody (Center C1081) Blocking Peptide - Protein Information****Name** MAP3K4**Synonyms** KIAA0213, MAPKKK4, MEKK4, MTK1**Function**

Component of a protein kinase signal transduction cascade. Activates the CSBP2, P38 and JNK MAPK pathways, but not the ERK pathway. Specifically phosphorylates and activates MAP2K4 and MAP2K6.

**Cellular Location**

Cytoplasm, perinuclear region. Note=Localized in perinuclear vesicular-like structures, probably Golgi-associated vesicles.

**Tissue Location**

Expressed at high levels in heart, placenta, skeletal muscle and pancreas, and at lower levels in other tissues

**MEKK4 Antibody (Center C1081) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **MEKK4 Antibody (Center C1081) Blocking Peptide - Images**

#### **MEKK4 Antibody (Center C1081) Blocking Peptide - Background**

The central core of each mitogen-activated protein kinase (MAPK) pathway is a conserved cascade of 3 protein kinases: an activated MAPK kinase kinase (MAPKKK) phosphorylates and activates a specific MAPK kinase (MAPKK), which then activates a specific MAPK. While the ERK MAPKs are activated by mitogenic stimulation, the CSBP2 and JNK MAPKs are activated by environmental stresses such as osmotic shock, UV irradiation, wound stress, and inflammatory factors. This gene encodes a MAPKKK, the MEKK4 protein, also called MTK1. This protein contains a protein kinase catalytic domain at the C terminus. The N-terminal nonkinase domain may contain a regulatory domain. Expression of MEKK4 in mammalian cells activated the CSBP2 and JNK MAPK pathways, but not the ERK pathway. In vitro kinase studies indicated that recombinant MEKK4 can specifically phosphorylate and activate PRKMK6 and SERK1, MAPKKs that activate CSBP2 and JNK, respectively but cannot phosphorylate PRKMK1, an MAPKK that activates ERKs. MEKK4 is a major mediator of environmental stresses that activate the CSBP2 MAPK pathway, and a minor mediator of the JNK pathway. Two alternatively spliced transcripts encoding distinct isoforms have been described.

#### **MEKK4 Antibody (Center C1081) Blocking Peptide - References**

Grucza, R.A., et al. Addict Biol 15(3):346-357(2010) Whitmarsh, A.J., et al. Oncogene 26(22):3172-3184(2007) Aissouni, Y., et al. Biochem. Biophys. Res. Commun. 338(2):808-814(2005) Abell, A.N., et al. J. Biol. Chem. 280(43):35793-35796(2005) Derbyshire, Z.E., et al. Mol. Cell. Biochem. 271 (1-2), 77-90 (2005) :