

Anti-MEK7 Antibody
Catalog # ABO11225**Specification**

Anti-MEK7 Antibody - Product Information

Application	WB
Primary Accession	O14733
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Dual specificity mitogen-activated protein kinase kinase 7(MAP2K7) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-MEK7 Antibody - Additional Information

Gene ID 5609

Other Names

Dual specificity mitogen-activated protein kinase kinase 7, MAP kinase kinase 7, MAPKK 7, 2.7.12.2, 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

Calculated MW

47485 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization

Nucleus. Cytoplasm .

Tissue Specificity

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

Protein Name

Dual specificity mitogen-activated protein kinase kinase 7

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human MEK7(24-40aa

ARRRIDLNLDISPQRPR), identical to the related rat and mouse sequences.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.

Anti-MEK7 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).

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.

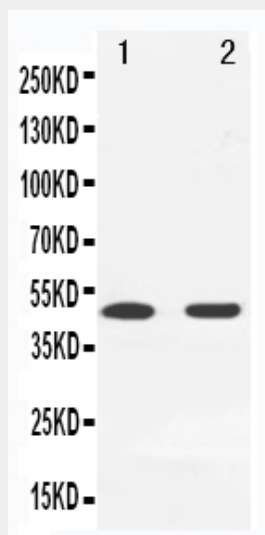
Anti-MEK7 Antibody - Protocols

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](#)

Anti-MEK7 Antibody - Images



Anti-MEK7 antibody, ABO11225, Western blotting
Lane 1: Rat Spleen Tissue Lysate
Lane 2: Rat Brain Tissue Lysate

Anti-MEK7 Antibody - Background

MAP2K7(Mitogen-activated protein kinase kinase 7), also known as MAP kinase kinase 7, MAPKK7, JNKK2, PRKMK7 or MKK7, is an enzyme that in humans is encoded by the MAP2K7 gene. This protein is a member of the mitogen-activated protein kinase kinase family. The MKK7 protein exists as six different isoforms with three possible N-termini(alpha, beta, and gamma isoforms) and two possible C-termini(1 and 2 isoforms). Schramek et al.(2011) showed that the doxorubicin-mediated DNA damage response in human A549 lung carcinoma cells caused rapid phosphorylation and upregulation of p53(TP53). MKK7 knockdown reduced p53 phosphorylation, delayed p53 upregulation, and interfered with cell cycle arrest at G2/M. MKK7 was activated in primary lung tumors, and tumors with a p53 mutation showed even higher MKK7 phosphorylation. Schramek et al.(2011) concluded that MKK7 exerts its tumor suppressive function through p53.