

Anti-MEK7 Picoband Antibody

Catalog # ABO12450

Product Information

Application	WB, IHC-P
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, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 µg/ml, Human, 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. .
Source	Eukaryota
Protein Name	Dual specificity mitogen-activated protein kinase kinase 7
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MEK7 (2-40aa AASSLEQKLSRLEAKLKQENREARRRIDLNLDISPQRPR), identical to the related mouse and rat 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.

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.

Background

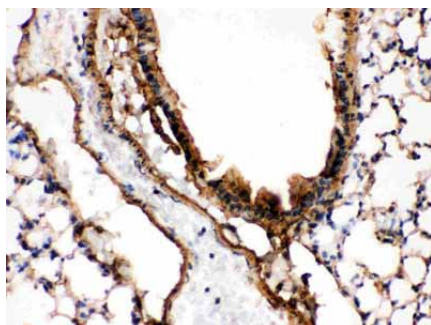
MAP2K7 (Mitogen-activated protein kinase kinase 7), also known as MAP kinase kinase 7, MAPKK7, JNKK2, PRKMK7 or MKK7, is an enzyme that in humans is encoded by the MAP2K7 gene. This protein is a member of the mitogen-activated protein kinase kinase family. The MKK7 protein exists as six different isoforms with three possible N-termini (α, β, and γ 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.

Images

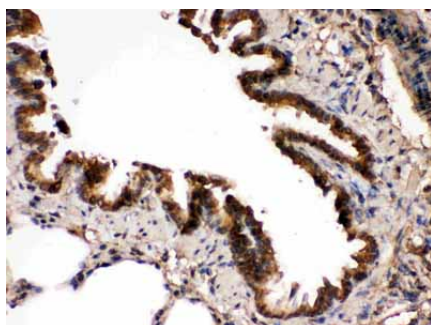
Anti- MEK7 Picoband antibody, ABO12450, Western



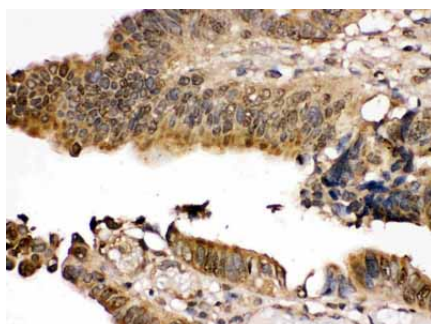
blottingAll lanes: Anti MEK7 (ABO12450) at 0.5ug/mlLane
1: HELA Whole Cell Lysate at 40ugLane 2: NIH3T3 Whole
Cell Lysate at 40ugPredicted bind size: 47KDObserved
bind size: 47KD



Anti- MEK7 Picoband antibody, ABO12450,IHC(P)IHC(P):
Mouse Lung Tissue



Anti- MEK7 Picoband antibody, ABO12450,IHC(P)IHC(P):
Rat Lung Tissue



Anti- MEK7 Picoband antibody, ABO12450,IHC(P)IHC(P):
Human Intestinal Cancer Tissue

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