10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Anti-MEK7 Picoband Antibody

Catalog # ABO12450

Specification

Anti-MEK7 Picoband Antibody - 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.

Anti-MEK7 Picoband 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
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. .

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 r˚Constitution, 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.**

Anti-MEK7 Picoband 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.

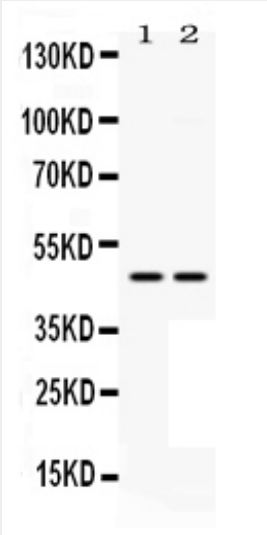
Anti-MEK7 Picoband Antibody - Protocols

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

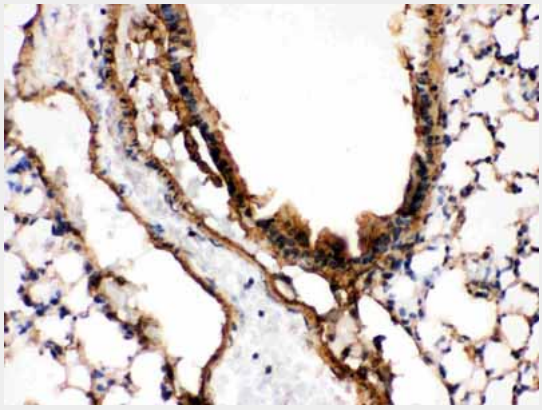
- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

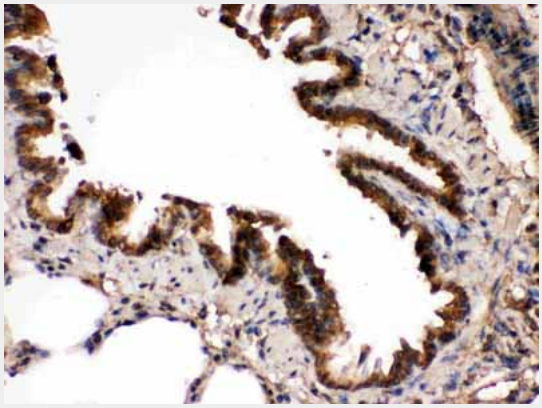
Anti-MEK7 Picoband Antibody - Images



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



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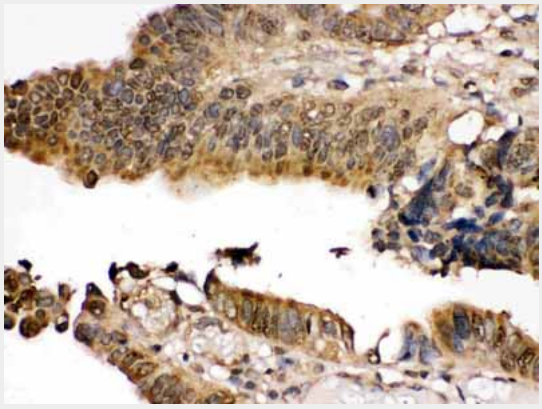
Anti- MEK7 Picoband antibody, ABO12450,IHC(P)IHC(P): Rat Lung Tissue



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

Anti-MEK7 Picoband 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 (Î±, Î², and Î³ 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.