

Recombinant Anti-MEK7 Rabbit mAb

Catalog # AP94987

Product Information

Application	WB, IHC, FC, IP, IF/IC
Primary Accession	O14733
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	47485

Additional Information

Gene ID	5609
Other Names	JNKK2; MEK7; MKK7; PRKMK7; SKK4; Dual specificity mitogen-activated protein kinase kinase 7; MAP kinase kinase 7; MAPKK 7; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human MEK7 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IP~~N/A IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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](#)).

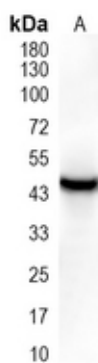
Cellular Location

Nucleus. Cytoplasm.

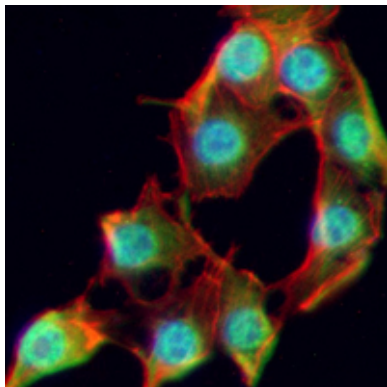
Tissue Location

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

Images



Western blot analysis of MEK7 expression in Hela (A) whole cell lysates. (Predicted band size: 47 kD; Observed band size: 47 kD)



Immunofluorescent analysis of MEK7 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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