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MEK7 Antibody

Rabbit mAb
Catalog # AP90870

Product Information

Application	WB, IHC, IF, FC, ICC, IP, IHF
Primary Accession	O14733
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	MKK7; Jnkk2; MAPKK7; PRKMK7; JNK-activating kinase 2; MAPKK 7; Mitogen Activated Protein Kinase kinase 7; SAPKK4; stress-activated protein kinase kinase 4;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	47485

Additional Information

Dilution	WB 1:1000~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:40 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MEK7
Description	MKK7 is strongly activated by TNF-α, as well as other environmental stresses, whereas SEK1/MKK4, which activates both p38 and SAPK/JNK pathways, is not activated by TNF-α. Sequence alignment of the activation loop of the MAP kinase kinase family members indicates that Ser271 and Thr275 are potential phosphorylation sites that are crucial for the kinase acivity.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

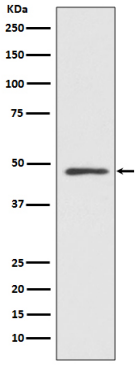
Name	MAP2K7
Synonyms	JNKK2, MEK7, MKK7, PRKMK7, SKK4
Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K4/MKK4, 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 MEK5 expression in Hela cell lysate.