

MKK7-S271/T275 Blocking Peptide (Center)

Synthetic peptide

Catalog # BP7918e

Specification

MKK7-S271/T275 Blocking Peptide (Center) - Product Information

Primary Accession

[O14733](#)

Other Accession

[O4KSH7](#), [O8CE90](#)**MKK7-S271/T275 Blocking Peptide (Center) - Additional Information****Gene ID** 5609**Other Names**

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, MAP2K7, JNKK2, MEK7, MKK7, PRKMK7, SKK4

Target/Specificity

The synthetic peptide sequence is selected from aa 266-279 of HUMAN MAP2K7

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MKK7-S271/T275 Blocking Peptide (Center) - 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.

MKK7-S271/T275 Blocking Peptide (Center) - Protocols

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

- [Blocking Peptides](#)

MKK7-S271/T275 Blocking Peptide (Center) - Images**MKK7-S271/T275 Blocking Peptide (Center) - Background**

This protein is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase specifically activates MAPK8/JNK1 and MAPK9/JNK2, and this kinase itself is phosphorylated and activated by MAP kinase kinase kinases including MAP3K1/MEKK1, MAP3K2/MEKK2, MAP3K3/MEKK5, and MAP4K2/GCK. This kinase is involved in the signal transduction mediating the cell responses to proinflammatory cytokines, and environmental stresses.

MKK7-S271/T275 Blocking Peptide (Center) - References

Yoshizawa, T., et al. J. Immunol. 181(5):3252-3258(2008) Vasilevskaya, I.A., et al. Mol. Pharmacol. 74(1):246-254(2008) Tornatore, L., et al. J. Mol. Biol. 378(1):97-111(2008)