Phospho-MKK7 (Ser271/Thr275) (R4F9) rabbit mAb FITC conjugate

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Applications	Detection	Clonality	Isotype
Flow Cytometry	N/A	Monoclonal	Rabbit IgGk

Format: FITC

Cross Reactivity: Predicted to work with mouse, rat and other homologues.

Formulation: 1X PBS, 0.09% NaN3, 0.2% BSA

Preparation: Protein A+G

Reactivity: Human

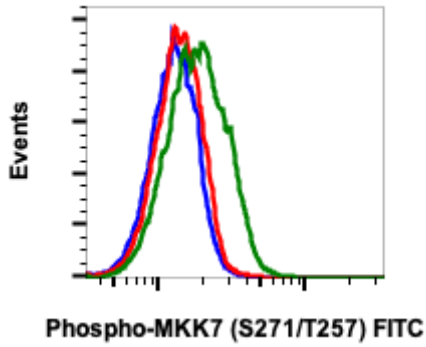
Recommended Usage: For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Ser271 and Thr275 of human MKK7

Description: MKK7 is a dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. It is an 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 phospho MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Phospho MKK7 has a specific role in JNK signal transduction pathway activated by proinflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis.

References:

Wu Z, et. al. (1997) Mol. Cell. Biol. 17:7407-7416.
2. Lu X, et al. (1997) J. Biol. Chem. 272:24751-24754.
3. Foltz I.N., et al. (1998) J. Biol. Chem. 273:9344-9351.



Flow Cytometry analysis of 293T cells unstained treated with imatinib as negative control (blue) or treated with imatinib (red) or treated with UV plus TPA and stained using phospho-MKK7 (Ser271/Thr275) antibody MKK7S271/T275-R4F9 FITC Cat# 2158.