

# Phospho-MKK7 (Ser271/Thr275) (R4F9) rabbit mAb SureLight 488 conjugate

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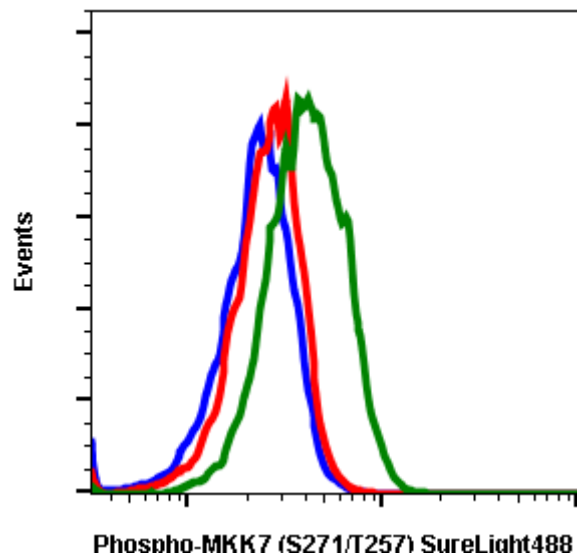
Catalog: #2160

Store at: 2-8°C

*For Research Use Only. Not For Use In Diagnostic Procedures.*

| Applications   | Detection | Clonality  | Isotype     |
|----------------|-----------|------------|-------------|
| Flow Cytometry | N/A       | Monoclonal | Rabbit IgGκ |

|                           |  |
|---------------------------|--|
| <b>Format:</b>            | SureLight 488  |
| <b>Cross Reactivity:</b>  | Predicted to work with mouse, rat and other homologues.  |
| <b>Formulation:</b>       | 1X PBS, 0.09% NaN <sub>3</sub> , 0.2% BSA  |
| <b>Preparation:</b>       | Protein A+G  |
| <b>Reactivity:</b>        | Human,Mouse,Rat  |
| <b>Recommended Usage:</b> | 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.  |
| <b>Immunogen:</b>         | A synthetic phospho-peptide corresponding to residues surrounding Ser271 and Thr275 of human MKK7  |
| <b>Description:</b>       | 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. |
| <b>References:</b>        | 1. Wu Z, et. al. (1997) Mol. Cell. Biol. 17:7407-7416.<br>2. Lu X, et al. (1997) J. Biol. Chem. 272:24751-24754.<br>3. Foltz I.N., et al. (1998) J. Biol. Chem. 273:9344-9351.   |



Flow Cytometry analysis of 293T cells unstained untreated as negative control (blue) or stained and untreated (red) or stained and treated with UV plus TPA using phospho-MKK7 (Ser271/Thr275) antibody MKK7S271/T275-R4F9 SureLight488 Cat# 2160.