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## MKK3/MKK6 Control Cell Extracts

Controls for 10 western blots

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity
MKK3/MKK6 Control Cell Extracts (3T3 untreated)	95928	200 µl
MKK3/MKK6 Control Cell Extracts (3T3 +UV)	40196	200 µl

<b>Description</b>	<p>Nonphosphorylated MKK3/MKK6 Control Cell Extracts: Total cell extracts from NIH/3T3 cells, serve as a negative control. Supplied in SDS Sample Buffer.</p> <p>Phosphorylated MKK3/MKK6 Control Cell Extracts: Total cell extracts from NIH/3T3 cells, treated with 50 mJ UV light and a 30 minute recovery, serve as a positive control. Supplied in SDS Sample Buffer.</p>
<b>Storage</b>	Supplied in SDS Sample Buffer: 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v phenol red or bromophenol blue. Store at -20°C or at -80°C for long term storage.
<b>Background</b>	MKK3 and MKK6 are two closely related dual-specificity protein kinases that activate p38 MAP kinase (1-5). MKK3 and MKK6 both phosphorylate and activate p38 MAP kinase at its activation site, Thr-Gly-Tyr, but do not phosphorylate or activate Erk1/2 or SAPK/JNK. Phosphorylation of p38 MAP kinase dramatically stimulates its ability to phosphorylate protein substrates such as ATF-2 and Elk-1. MKK3 and MKK6 are both activated by different forms of cellular stress and inflammatory cytokines (4,5). Activation of MKK3 and MKK6 occurs through phosphorylation at Ser189 and Thr222 on MKK3 (2) and Ser207 and Thr211 on MKK6 (4,5).
<b>Directions for Use</b>	Boil for 3 minutes prior to use. Load 20 µl of phosphorylated and nonphosphorylated MKK3/MKK6 Control Cell Extracts per lane.
<b>Background References</b>	<ol style="list-style-type: none"> <li>Derijard, B. et al. (1995) <i>Science</i> 267, 682-685.</li> <li>Raingeaud, J. et al. (1995) <i>J. Biol. Chem.</i> 270, 7420-7426.</li> <li>Sluss, H.K. et al. (1994) <i>Mol. Cell. Biol.</i> 14, 8376-8384.</li> <li>Raingeaud, J. et al. (1996) <i>Mol. Cell. Biol.</i> 16(3), 1247-1255.</li> <li>Han, J. et al. (1996) <i>J. Biol. Chem.</i> 271, 2886-2891.</li> </ol>

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