

MKK3/MKK6 Control Cell Extracts

✓ Controls for 10 Western mini-blot

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com

Support ■ 877-678-TECH (8324)
info@cellsignal.com

Web ■ www.cellsignal.com

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This product is for *in vitro* research use only and is not intended for use in humans or animals.

Background: 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 of serine and threonine residues at sites Ser189 and Thr193 for MKK3 (2) and Ser207 and Thr211 for MKK6 (4,5).

Description: *Nonphosphorylated MKK3/MKK6 Control Cell Extracts:* Total cell extracts from NIH/3T3 cells, prepared without treatment, serve as a negative control. Supplied in SDS Sample Buffer

Phosphorylated MKK3/MKK6 Control Cell Extracts: Total cell extracts from NIH/3T3 cells, prepared with UV light treatment, serve as a positive control. Supplied in SDS Sample Buffer.

Applications: As controls, CST recommends using 20 μ l of phosphorylated and nonphosphorylated MKK3/MKK6 control cell extracts.

Background References:

- (1) Derijard, B. et al. (1995) *Science* 267, 682-685.
- (2) Raingeaud, J. et al. (1995) *J. Biol. Chem.* 270, 7420-7426.
- (3) Sluss, H.K. et al. (1994) *Mol. Cell. Biol.* 14, 8376-8384.
- (4) Raingeaud, J. et al. (1996) *Mol. Cell. Biol.* 16(3), 1247-1255.
- (5) Han, J. et al. (1996) *J. Biol. Chem.* 271, 2886-2891.

Companion Products:

PhosphoPlus® MKK3/MKK6 (Ser189/207) Antibody Kit #9230
Phospho-MKK3/MKK6 (Ser189/207) Antibody #9231
MKK3 Antibody #9232
Anti-rabbit IgG, HRP-linked Antibody #7074
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder #7727
20X LumiGLO® Reagent and 20X Peroxide #7003
MKK3b Antibody #9238
Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
Phospho-MKK3/MKK6 (Ser189/207) (22A8) Rabbit mAb #9236
MKK6 Antibody #9264

