Store at -20°C

#9253

SAPK/JNK Control Cell Extracts

☑ Controls for 10 western blots

Cell Signaling TECHNOLOGY®

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

Product Includes	Product #	Quantity
SAPK/JNK Control Cell Extracts (293 untreated)	56374	150 ul
SAPK/JNK Control Cell Extracts (293 +UV)	71210	150 ul

Background: The stress-activated protein kinase/Jun-amino-terminal kinase SAPK/JNK is potently and preferentially activated by a variety of environmental stresses including UV and gamma radiation, ceramides, inflammatory cytokines, and in some instances, by growth factors and GPCR agonists (1-6). As with the other MAPKs, the core signaling unit is composed of a MAPKKK, typically MEKK1-MEKK4, or by one of the mixed lineage kinases (MLKs), which phosphorylate and activate MKK4/7. Upon activation, MKKs phosphorylate and activate the SAPK/JNK kinase (2). Stress signals are delivered to this cascade by small GTPases of the Rho family (Rac, Rho, cdc42) (3). Both Rac1 and cdc42 mediate the stimulation of MEKKs and MLKs (3). Alternatively, MKK4/7 can be activated in a GTPase-independent mechanism via stimulation of a germinal center kinase (GCK) family member (4). There are three SAPK/JNK genes each of which undergoes alternative splicing resulting in numerous isoforms (3). SAPK/JNK, when active as a dimer, can translocate to the nucleus and regulate transcription through its effects on c-Jun, ATF-2, and other transcription factors (3,5).

Description: *Nonphosphorylated SAPK/JNK Control Cell Extracts:* Total cell extracts from 293 cells, serve as a negative control. Supplied in SDS Sample Buffer.

Phosphorylated SAPK/JNK Control Cell Extracts: Total cell extracts from 293 cells, treated with 50 mJ UV light and a 30 minute recovery, serve as a positive control. Supplied in SDS Sample Buffer.

Directions for Use: Boil for 3 minutes prior to use. Load 15 µl of phosphorylated and nonphosphorylated SAPK/JNK Control Cell Extracts per lane.

Background References:

(1) Davis, R.J. (1999) *Biochem Soc Symp* 64, 1-12.

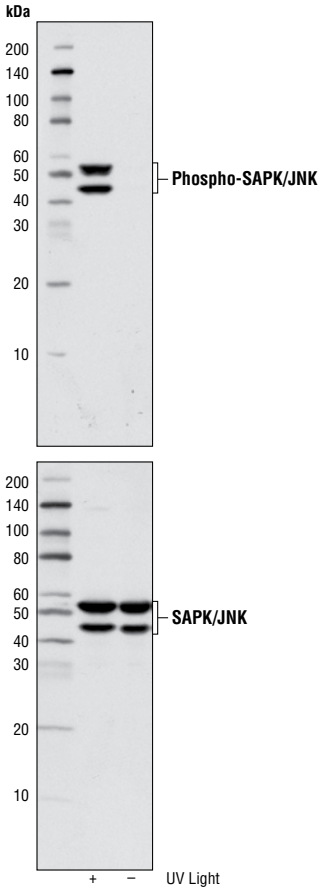
(2) Ichijo, H. (1999) *Oncogene* 18, 6087-93.

(3) Kyriakis, J.M. and Avruch, J. (2001) *Physiol Rev* 81, 807-69.

(4) Kyriakis, J.M. (1999) *J Biol Chem* 274, 5259-62.

(5) Leppä, S. and Bohmann, D. (1999) *Oncogene* 18, 6158-62.

(6) Whitmarsh, A.J. and Davis, R.J. (1998) *Trends Biochem Sci* 23, 481-5.



Western blot analysis of extracts from 293 cells, treated with or without UV light, using Phospho-SAPK/JNK (Thr183/Tyr185) (98F2) Rabbit mAb (upper) and SAPK/JNK (56G8) Rabbit mAb (lower).

Storage: *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.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.