Store at -20°C

#9223

ATF-2 Control Cell Extracts

☑ Controls for 10 mini-blots

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

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Background: The transcription factor ATF-2 (also called CRE-BP1) binds to both AP-1 and CRE DNA response elements and is a member of the ATF/CREB family of leucine zipper proteins (1). ATF-2 interacts with a variety of viral oncoproteins and cellular tumor suppressors and is a target of the SAPK/JNK and p38 MAP kinase signaling pathways (2-4). Various forms of cellular stress, including genotoxic agents, inflammatory cytokines and UV irradiation, stimulate the transcriptional activity of ATF-2. Cellular stress activates ATF-2 by phosphorylation of Thr69 and Thr71 (2-4). Both SAPK and p38 MAPK have been shown to phosphorylate ATF-2 at these sites *in vitro* and in cells transfected with ATF-2. Mutations of these sites result in the loss of stress-induced transcription by ATF-2 (2-4). In addition, mutations at these sites reduce the ability of E1A and Rb to stimulate gene expression via ATF-2 (2).

Description: Nonphosphorylated ATF-2 Control Cell Extracts: Total extracts from NIH/3T3 cells, prepared without treatment, to serve as a negative control. Supplied in SDS Sample Buffer. Store at -20°C.

Phosphorylated ATF-2 Control Cell Extracts: Total extracts from NIH/3T3 cells, prepared with anisomycin treatment, to serve as a positive control. Supplied in SDS Sample Buffer. Store at -20°C.

Applications: Western Blots: For controls, we recommend using 20 µl of phosphorylated and nonphosphorylated ATF-2 control extracts.

Background References:

(1) Abdel-Hafiz, H.A. et al. (1992) *Mol. Endocrinol.* 6, 2079–2089.

(2) Gupta, S. et al. (1995) *Science* 267, 389–393.

(3) van Dam, H. et al. (1995) *EMBO J.* 14, 1798–1811.

(4) Livingstone, C. et al. (1995) *EMBO J.* 14, 1785–1797.

Companion Products:

PhosphoPlus® ATF-2 (Thr71) Antibody Kit #9220

Phospho-ATF-2 (Thr71) Antibody #9221

Phospho-ATF-2 (Thr69/71) Antibody #9225

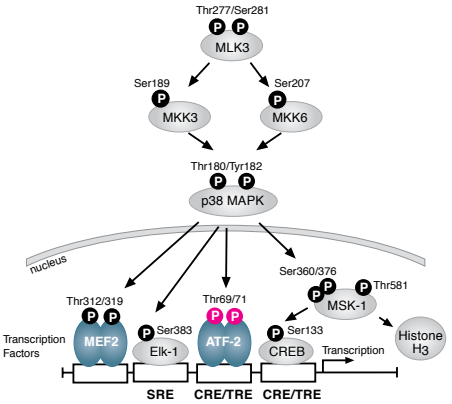
Anti-rabbit IgG, HRP-linked Antibody #7074

Prestained Protein Marker, Broad Range (Premixed Format) #7720

Biotinylated Protein Ladder Detection Pack #7727

20X LumiGLO® Reagent and 20X Peroxide #7003

ATF-2 (20F1) Rabbit mAb #9226



ATF-2 Signaling Pathway

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **IC**—Immunocytochemistry **IF**—Immunofluorescence **F**—Flow cytometry **E**—ELISA **D**—DELFIA®

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **X**—Xenopus **Z**—zebra fish **B**—bovine **All**—all species expected

Species enclosed in parentheses are predicted to react based on 100% sequence homology.