

**#9225** Store at -20°C

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

100 µl  
 (10 western blots)

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

rev. 08/23/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

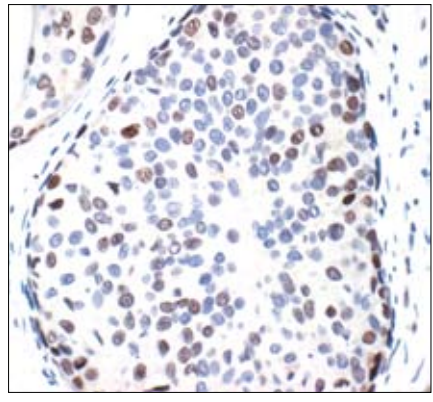
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P Endogenous	H, M, R, Mk	70 kDa	Rabbit**

**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).

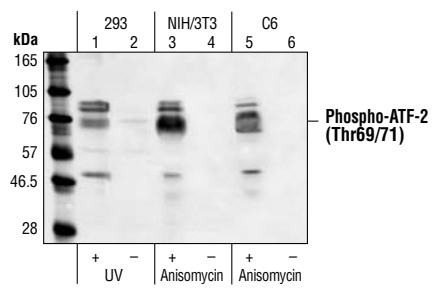
**Specificity/Sensitivity:** Phospho-ATF-2 (Thr69/71) Antibody detects endogenous levels of ATF-2 only when dually phosphorylated at both threonine 69 and threonine 71. It does not recognize ATF-2 singly phosphorylated at either threonine 69 or threonine 71.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr69 and Thr71 of human ATF-2. Antibodies are purified by protein A and peptide affinity chromatography.

- 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.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, showing nuclear localization, using Phospho-ATF-2 (Thr69/71) Antibody.



Western blot analysis of extracts from 293 cells, untreated or UV-treated (lanes 1 and 2), NIH/3T3 cells, untreated or anisomycin-treated (lanes 3 and 4), and C6 cells, untreated or anisomycin-treated (lanes 5 and 6), using Phospho-ATF-2 (Thr69/71) Antibody.

**Entrez-Gene ID** #1386  
**Swiss-Prot Acc.** #P15336

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

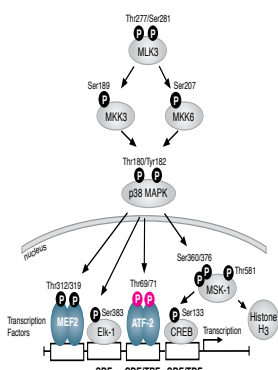
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

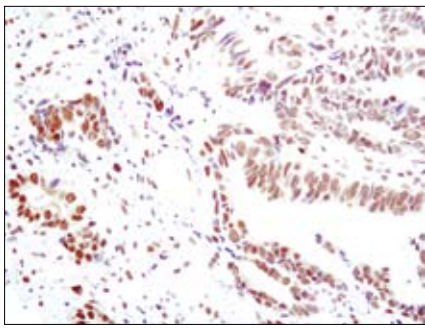
Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.



ATF-2 Signaling Pathway

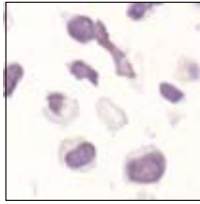
**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry 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 Ce—C. elegans All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

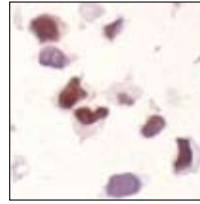


Immunohistochemical analysis of paraffin-embedded human colon carcinoma using Phospho-ATF2 (Thr69/71) Antibody.

**Untreated**

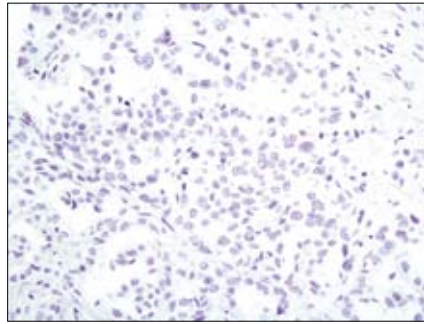
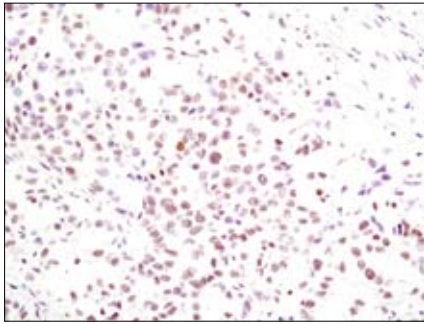


**Anisomycin**



Immunohistochemical analysis of paraffin-embedded NIH/3T3 cells, untreated (left) or anisomycin treated (right), using Phospho-ATF-2 (Thr69/71) Antibody.

Phospho-ATF-2 (Thr69/71) Specificity	
Peptide	ELISA Reactivity
ATF-2 (nonphospho)	—
Phospho ATF-2 (Thr69)	—
Phospho ATF-2 (Thr71)	—
Phospho ATF-2 (Thr69/71)	+ + + +



Immunohistochemical analysis of paraffin-embedded human lung carcinoma, control (left) or  $\lambda$  phosphatase-treated (right), using Phospho-ATF2 (Thr69/71) Antibody.