



Phospho-ATF2 (T71) Antibody

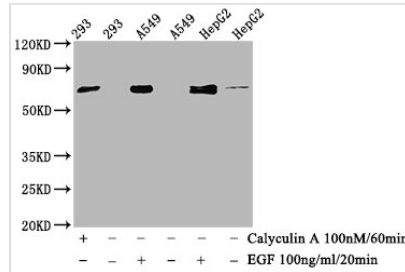
Product Code	CSB-RA002270A71phHU
Abbreviation	Cyclic AMP-dependent transcription factor ATF-2
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P15336
Immunogen	A synthesized peptide derived from Human Phospho-ATF2 (T71)
Species Reactivity	Human
Tested Applications	ELISA, WB, IF; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200
Relevance	<p>Transcriptional activator which regulates the transcription of various genes, including those involved in anti-apoptosis, cell growth, and DNA damage response. Dependent on its binding partner, binds to CRE (cAMP response element) consensus sequences (5'-TGACGTCA-3') or to AP-1 (activator protein 1) consensus sequences (5'-TGACTCA-3'). In the nucleus, contributes to global transcription and the DNA damage response, in addition to specific transcriptional activities that are related to cell development, proliferation and death. In the cytoplasm, interacts with and perturbs HK1- and VDAC1-containing complexes at the mitochondrial outer membrane, thereby impairing mitochondrial membrane potential, inducing mitochondrial leakage and promoting cell death. The phosphorylated form (mediated by ATM) plays a role in the DNA damage response and is involved in the ionizing radiation (IR)-induced S phase checkpoint control and in the recruitment of the MRN complex into the IR-induced foci (IRIF). Exhibits histone acetyltransferase (HAT) activity which specifically acetylates histones H2B and H4 in vitro. In concert with CUL3 and RBX1, promotes the degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. Can elicit oncogenic or tumor suppressor activities depending on the tissue or cell type.</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Cyclic AMP-dependent transcription factor ATF-2, Activating transcription factor 2, Cyclic AMP-responsive element-binding protein 2, CREB-2, cAMP-responsive element-binding protein 2, HB16, Histone acetyltransferase ATF2, cAMP response element-binding protein CRE-BP1, ATF2, CREB2, CREBP1
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling



Gene Names ATF2

Accession NO. 4F2

Image



Western Blot

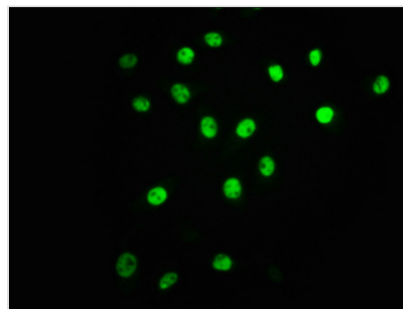
Positive WB detected in 293 whole cell lysate, A549 whole cell lysate, HepG2 whole cell lysate (treated with Calyculin A or EGF)

All lanes Phospho-ATF2 antibody at 1.015 μg/ml
Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 70 KDa

Observed band size: 70 KDa



Immunofluorescence staining of A549

cells (treated with 100mM EGF for 20min) with CSB-RA002270A71pHU at 1:63, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

Phospho-ATF2 (T71) recombinant monoclonal antibody was prepared by cloning the coding sequence for the phospho-ERN1 (S724) monoclonal antibody (produced by immunizing animals with the synthetic phosphopeptide of ERN1) into the plasmids and transfecting the clones into cell lines. It is a rabbit IgG purified through the affinity-chromatography method. This phospho-ATF2 (T71) antibody detects endogenous levels of human ATF2 only when phosphorylated at T71. It can be applied in ELISA, WB, and IF analyses.

ATF2 is found in almost all cell types and regulates the transcription of genes involved in a wide range of biological processes, including cell growth, development, and stress. ATF2 participates in the transmission of extracellular signals to the nucleus, promoting transcriptional responses to stimuli. Many stimuli, such as growth hormones, UV radiation, and cytokines, can activate ATF2. Stress-activated protein kinases (SAPKs) (e.g., p38) phosphorylate ATF2 at Thr69 and Thr71, which activates transcriptional activation of ATF2. ATF2 can interact with other AP1 proteins and translocate to the nucleus after being phosphorylated at T69/T71, allowing it to influence gene expression.