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ATF2 Antibody

Rabbit mAb
Catalog # AP90104

Product Information

Application	WB, IHC, IF, ICC, IP, IHF
Primary Accession	P15336
Reactivity	Human
Clonality	Monoclonal
Other Names	ATF2; Activating 2; CREB2; CREBP1; Cyclic-AMP-dependent ATF-2; HB16; MXBP protein;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	54537

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:100 ICC/IF 1:50~1:100 IP 1:30
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human ATF2
Description	This gene encodes a transcription factor that is a member of the leucine zipper family of DNA binding proteins. This protein binds to the cAMP-responsive element (CRE), an octameric palindrome. The protein forms a homodimer or heterodimer with c-Jun and stimulates CRE-dependent transcription. The protein is also a histone acetyltransferase (HAT) that specifically acetylates histones H2B and H4 in vitro;
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	ATF2
Synonyms	CREB2, CREBP1
Function	Transcriptional activator which regulates the transcription of various genes, including those involved in anti-apoptosis, cell growth, and DNA damage response (PubMed:11932306, PubMed:15105425, PubMed:15916964, PubMed:22304920, PubMed:2529117). 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') (PubMed:11932306, PubMed:2529117). 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 (PubMed:22304920). In liver, acts as a regulator of

glucose metabolism downstream of OR5V1 signaling, which promotes ATF2 activation, leading to expression of carnitine palmitoyltransferase CPT1A (By similarity). 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 (PubMed:22304920). 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) (PubMed:15916964). In concert with CUL3 and RBX1, promotes the degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM (PubMed:18397884). Can elicit oncogenic or tumor suppressor activities depending on the tissue or cell type (PubMed:18677098).

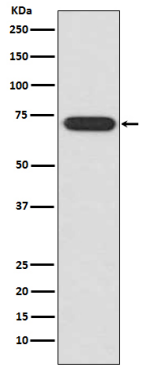
Cellular Location

Nucleus. Cytoplasm Mitochondrion outer membrane Note=Shuttles between the cytoplasm and the nucleus and heterodimerization with JUN is essential for the nuclear localization (PubMed:22275354). Localization to the cytoplasm is observed under conditions of cellular stress and in disease states (PubMed:22304920) Localizes at the mitochondrial outer membrane in response to genotoxic stress (PubMed:22304920). Phosphorylation at Thr-52 is required for its nuclear localization and negatively regulates its mitochondrial localization (PubMed:22304920). Co-localizes with the MRN complex in the IR-induced foci (IRIF) (PubMed:15916964)

Tissue Location

Ubiquitously expressed, with more abundant expression in the brain.

Images



Western blot analysis of ATF2 expression in HeLa cell lysate.

Image not found : 202311/AP90104-IF.jpg

Immunofluorescent analysis of Hela cells, using ATF2 Antibody .

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