

**ATF2 Antibody (clone 4A3)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS14608****Specification**

---

**ATF2 Antibody (clone 4A3) - Product Information**

Application	IHC
Primary Accession	<a href="#">P15336</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	55kDa KDa

**ATF2 Antibody (clone 4A3) - Additional Information****Gene ID** 1386**Other Names**

Cyclic AMP-dependent transcription factor ATF-2, cAMP-dependent transcription factor ATF-2, 2.3.1.48, 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

**Target/Specificity**

Human ATF2

**Reconstitution & Storage**

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

**Precautions**

ATF2 Antibody (clone 4A3) is for research use only and not for use in diagnostic or therapeutic procedures.

**ATF2 Antibody (clone 4A3) - 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. 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 (PubMed:<a href="http://www.uniprot.org/citations/10821277" target="\_blank">10821277</a>). 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.

#### **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 Localization to the cytoplasm is observed under conditions of cellular stress and in disease states. Localizes at the mitochondrial outer membrane in response to genotoxic stress. Phosphorylation at Thr-52 is required for its nuclear localization and negatively regulates its mitochondrial localization. Co-localizes with the MRN complex in the IR-induced foci (IRIF)

#### **Tissue Location**

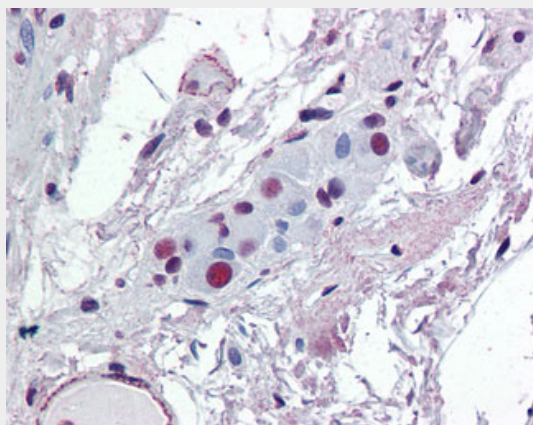
Ubiquitously expressed, with more abundant expression in the brain

#### **ATF2 Antibody (clone 4A3) - Protocols**

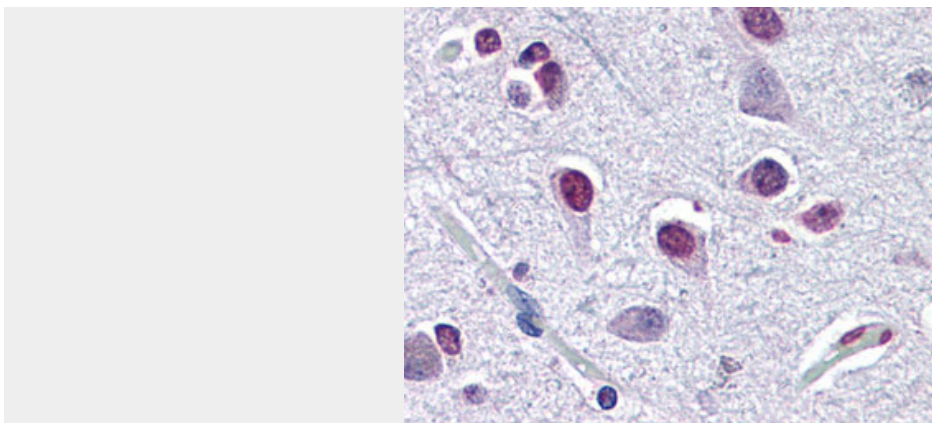
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **ATF2 Antibody (clone 4A3) - Images**



Anti-ATF2 antibody IHC of human small intestine, submucosal plexus.



Anti-ATF2 antibody IHC of human brain, cortex.

### **ATF2 Antibody (clone 4A3) - Background**

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.

### **ATF2 Antibody (clone 4A3) - References**

Maekawa T., et al. EMBO J. 8:2023-2028(1989).  
Yang L., et al. J. Immunol. 158:2522-2525(1997).  
Bailey J., et al. J. Clin. Endocrinol. Metab. 87:1717-1728(2002).  
von Hippel A.C., et al. Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.  
Hillier L.W., et al. Nature 434:724-731(2005).