

**Goat Anti-ATF2 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1122a

**Specification**

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**Goat Anti-ATF2 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P15336</a>
Other Accession	<a href="#">NP_001871</a> , <a href="#">1386</a> , <a href="#">81647 (rat)</a>
Reactivity	<b>Human</b>
Predicted	<b>Rat, Dog</b>
Host	<b>Goat</b>
Clonality	<b>Polyclonal</b>
Concentration	<b>100ug/200ul</b>
Isotype	<b>IgG</b>
Calculated MW	<b>54537</b>

**Goat Anti-ATF2 Antibody - 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

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-ATF2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-ATF2 Antibody - 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

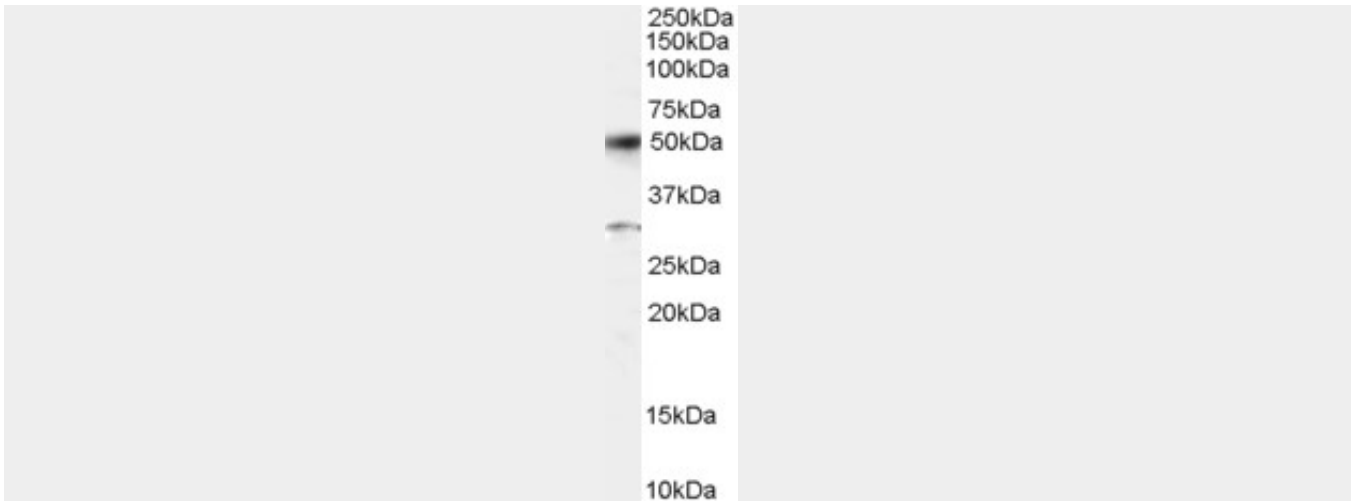
### **Goat Anti-ATF2 Antibody - Protocols**

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

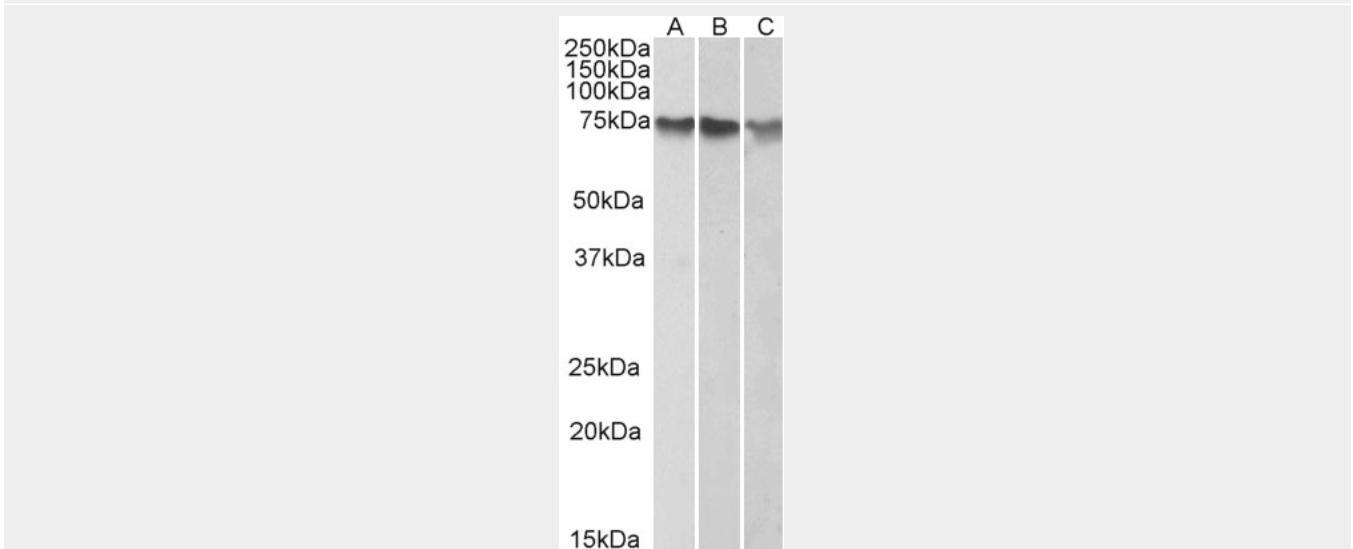
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Goat Anti-ATF2 Antibody - Images**





AF1122a staining (0.5 µg/ml) of Human Placenta lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 12 hour. Detected by western blot using chemiluminescence.



AF1122a (1 µg/ml) staining of HepG2 (A), K562 (B) and HeLa (C) nuclear lysates (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### Goat Anti-ATF2 Antibody - Background

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; thus it may represent a class of sequence-specific factors that activate transcription by direct effects on chromatin components. Additional transcript variants have been identified but their biological validity has not been determined.

### Goat Anti-ATF2 Antibody - References

- Variation at the NFATC2 Locus Increases the Risk of Thiazolinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
- Growth factor stimulation induces cell survival by c-Jun. ATF2-dependent activation of Bcl-XL. Salameh A, et al. J Biol Chem, 2010 Jul 23. PMID 20507983.
- Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success

genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.

JNK-ATF-2 inhibits thrombomodulin (TM) expression by recruiting histone deacetylase4 (HDAC4) and forming a transcriptional repression complex in the TM promoter. Rong Y, et al. FEBS Lett, 2010 Mar 5. PMID 20116378.

Stability and DNA-binding ability of the bZIP dimers formed by the ATF-2 and c-Jun transcription factors. Carrillo RJ, et al. J Mol Biol, 2010 Feb 19. PMID 19944700.