Rabbit ATF2 Polyclonal Antibody | anti-ATF2 antibody

Phospho-ATF2 (Thr71/53) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31012	**Rabbit**	**Human, Mouse, Rat**	**Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, Immunoprecipitation, ELISA**

PRODUCT SYNONYMS

ATF2; Polyclonal Antibody; Phospho-ATF2 (Thr71/53) Antibody; Activating transcription factor 2; Activating transcription factor 2 splice variant ATF2 var2; ATF 2; Atf-2; Atf2; ATF2 protein; ATF2_HUMAN; cAMP Response Element Binding Protein 2; cAMP response element binding protein CRE BP1; cAMP response element-binding protein CRE-BP1; cAMP responsive element binding protein 2; formerly; cAMP-dependent transcription factor ATF-2; cAMP-responsive element-binding protein 2; CRE BP1; CRE-BP; CREB 2; CREB-2; CREB2; CREBP1; Cyclic AMP dependent transcription factor ATF 2; Cyclic AMP-dependent transcription factor ATF-2; Cyclic AMP-responsive element-binding protein 2; D130078H02Rik; D18875; HB 16; HB16; Histone acetyltransferase ATF2; MGC105211; MGC105222; MGC111558; MGC142504; mXBP; MXBP protein; Tg(Gzma-Klra1)7Wum; TREB 7; TREB7; anti-ATF2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-ATF2 (Thr71 or 53) antibody detects endogenous levels of ATF2 only when phosphorylated at Threonine 71 or 53
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	505
Applicable Applications for anti-ATF2 antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), IP (Immunoprecipitation), ELISA
Application Notes	WB: 1:500-1:2000 IHC: 1:50-1:200 IF/ICC: 1:100-1:500
Immunogen	A synthesized peptide derived from human ATF2 around the phosphorylation site of Threonine 71 or 53
Subcellular Location	Nucleus.
Tissue Specificity	Ubiquitously expressed, with more abundant expression in the brain.
Conjugation	Unconjugated
Epitope	Phospho Thr71, Phospho Thr53
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA31012 staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

IHC (Immunohistochemistry)
AAA31012 at 1/200 staining Rat kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

IHC (Immunohistochemistry)
AAA31012 at 1/200 staining Rat lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

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ADDITIONAL INFORMATION

Related Product Information for anti-ATF2 antibody	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. 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. 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. Subunit Structure: Binds DNA as a dimer and can form a homodimer in the absence of DNA. Can form a heterodimer with JUN. Heterodimerization is essential for its transcriptional activity. Interacts with SMAD3 and SMAD4. Binds through its N-terminal region to UTF1 which acts as a coactivator of ATF2 transcriptional activity. Interacts with the HK1/VDAC1 complex. Interacts with NBN, MRE11, XPO1, KAT5 and CUL3. Post-translational Modifications: Phosphorylation of Thr-69 by MAPK14 and MAPK11, and at Thr-71 by MAPK1/ERK2, MAPK3/ERK1, MAPK11, MAPK12 and MAPK14 in response to external stimulus like insulin causes increased transcriptional activity. Phosphorylated by PLK3 following hyperosmotic stress. Also phosphorylated and activated by JNK and CaMK4. ATM-mediated phosphorylation at Ser-490 and Ser-498 stimulates its function in DNA damage response. Phosphorylation at Ser-62, Thr-73 and Ser-121 activates its transcriptional activity. Phosphorylation at Thr-69 or Thr-71 enhances its histone acetyltransferase (HAT) activity. Similarity: The nuclear export signal 1 (N-NES) negatively regulates its nuclear localization and transcriptional activity. Belongs to the bZIP family. ATF subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	368711269
NCBI GeneID	1386
NCBI Accession #	NP_001243019.1
NCBI GenBank Nucleotide #	NM_001256090.1
UniProt Accession #	P15336; Q13000; Q3B7B7; Q4ZFU9; Q53RY2; Q8TAR1; A1L3Z2; A4D7U4; A4D7U5; A4D7V1; D3DPE9; G8JLM5
Molecular Weight	Observed: 52 kDa Predicted: 55 kDa
NCBI Official Full Name	cyclic AMP-dependent transcription factor ATF-2 isoform 1
NCBI Official Synonym Full Names	activating transcription factor 2
NCBI Official Symbol	ATF2
NCBI Official Synonym Symbols	HB16; CREB2; TREB7; CREB-2; CRE-BP1
NCBI Protein Information	cyclic AMP-dependent transcription factor ATF-2
UniProt Protein Name	Cyclic AMP-dependent transcription factor ATF-2
UniProt Gene Name	**ATF2**
UniProt Synonym Gene Names	CREB2; CREBP1; cAMP-dependent transcription factor ATF-2; CREB-2; cAMP-responsive element-binding protein 2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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