

# ATF-7 Polyclonal Antibody

Catalog # AP68573

## Product Information

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<b>Application</b>	WB, IHC-P, IF
<b>Primary Accession</b>	<a href="#">P17544</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	51757

## Additional Information

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<b>Gene ID</b>	11016
<b>Other Names</b>	ATF7; ATFA; Cyclic AMP-dependent transcription factor ATF-7; cAMP-dependent transcription factor ATF-7; Activating transcription factor 7; Transcription factor ATF-A
<b>Dilution</b>	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200
<b>Format</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
<b>Storage Conditions</b>	-20°C

## Protein Information

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<b>Name</b>	ATF7
<b>Synonyms</b>	ATFA
<b>Function</b>	Stress-responsive chromatin regulator that plays a role in various biological processes including innate immunological memory, adipocyte differentiation or telomerase regulation (PubMed: <a href="#">29490055</a> ). In absence of stress, contributes to the formation of heterochromatin and heterochromatin-like structure by recruiting histone H3K9 tri- and di-methyltransferases thus silencing the transcription of target genes such as STAT1 in adipocytes, or genes involved in innate immunity in macrophages and adipocytes (By similarity). Stress induces ATF7 phosphorylation that disrupts interactions with histone methyltransferase and enhances the association with coactivators containing histone acetyltransferase and/or histone demethylase, leading to disruption of the heterochromatin-like structure and subsequently transcriptional activation (By similarity). In response to TNF-alpha, which is induced by various stresses, phosphorylated ATF7 and

telomerase are released from telomeres leading to telomere shortening (PubMed:[29490055](#)). Also plays a role in maintaining epithelial regenerative capacity and protecting against cell death during intestinal epithelial damage and repair (By similarity).

#### Cellular Location

Nucleus {ECO:0000255 | PROSITE-ProRule:PRU00978, ECO:0000269 | PubMed:17264123}. Nucleus, nucleoplasm. Chromosome, telomere. Note=Mainly nucleoplasmic. Restricted distribution to the perinuclear region. The sumoylated form locates to the nuclear periphery

#### Tissue Location

Expressed in various tissues including heart, brain, placenta, lung and skeletal muscle. Highest levels in skeletal muscle. Lowest in lung and placenta.

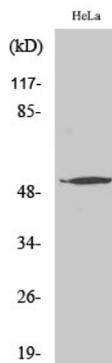
## Background

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Plays important functions in early cell signaling. Binds the cAMP response element (CRE) (consensus: 5'-GTGACGT[AG][AG]-3'), a sequence present in many viral and cellular promoters. Activator of the NF-ELAM1/delta-A site of the E-selectin promoter. Has no intrinsic transcriptional activity, but activates transcription on formation of JUN or FOS heterodimers. Also can bind TRE promoter sequences when heterodimerized with members of the JUN family. Isoform 5 acts as a negative regulator, inhibiting both ATF2 and ATF7 transcriptional activities. It may exert these effects by sequestering in the cytoplasm the Thr-53 phosphorylating kinase, preventing activation.

## Images

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Western Blot analysis of various cells using ATF-7 Polyclonal Antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.