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ATF-7 Polyclonal Antibody

Catalog # AP68573

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P17544
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	51757

Additional Information

Gene ID	11016
Other Names	ATF7; ATFA; Cyclic AMP-dependent transcription factor ATF-7; cAMP-dependent transcription factor ATF-7; Activating transcription factor 7; Transcription factor ATF-A
Dilution	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 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

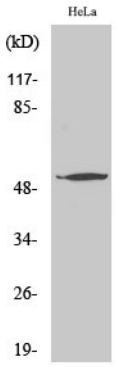
Name	ATF7
Synonyms	ATFA
Function	Stress-responsive chromatin regulator that plays a role in various biological processes including innate immunological memory, adipocyte differentiation or telomerase regulation (PubMed:29490055). In absence of stress, contributes to the formation of heterochromatin and 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, 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

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 sequestrating in the cytoplasm the Thr-53 phosphorylating kinase, preventing activation.

Images



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'.