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ATF5 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14991b

Product Information

Application	WB, E
Primary Accession	Q9Y2D1
Other Accession	NP_036200.2, NP_001180575.1
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35223
Calculated MW	30674
Antigen Region	188-216

Additional Information

Gene ID	22809
Other Names	Cyclic AMP-dependent transcription factor ATF-5, cAMP-dependent transcription factor ATF-5, Activating transcription factor 5, Transcription factor ATFx, ATF5, ATFX
Target/Specificity	This ATF5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 188-216 amino acids from the C-terminal region of human ATF5.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATF5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATF5
Synonyms	ATFX

Function	Transcription factor that either stimulates or represses gene transcription through binding of different DNA regulatory elements such as cAMP response element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), ATF5-specific response element (ARE) (consensus: 5'- C[CT]TCT[CT]CCTT[AT]-3') but also the amino acid response element (AARE), present in many viral and cellular promoters. Critically involved, often in a cell type-dependent manner, in cell survival, proliferation, and differentiation (PubMed:10373550, PubMed:15358120, PubMed:20654631, PubMed:21212266). Its transcriptional activity is enhanced by CCND3 and slightly inhibited by CDK4 (PubMed:15358120). Important regulator of the cerebral cortex formation, functions in cerebral cortical neuroprogenitor cells to maintain proliferation and to block differentiation into neurons. Must be down-regulated in order for such cells to exit the cycle and differentiate (By similarity). Participates in the pathways by which SHH promotes cerebellar granule neuron progenitor cells proliferation (By similarity). Critical for survival of mature olfactory sensory neurons (OSN), directs expression of OSN-specific genes (By similarity). May be involved in osteogenic differentiation (PubMed:22442021). Promotes cell proliferation and survival by inducing the expression of EGR1 sinergistically with ELK1. Once acetylated by EP300, binds to ARE sequences on target genes promoters, such as BCL2 and EGR1 (PubMed:21791614). Plays an anti-apoptotic role through the transcriptional regulation of BCL2, this function seems to be cell type-dependent (By similarity). Cooperates with NR1I3/CAR in the transcriptional activation of CYP2B6 in liver (PubMed:18332083). In hepatic cells, represses CRE-dependent transcription and inhibits proliferation by blocking at G2/M phase (PubMed:18701499, PubMed:22528486). May act as a negative regulator of IL1B transduction pathway in liver (PubMed:24379400). Upon IL1B stimulus, cooperates with NLK to activate the transactivation activity of C/EBP subfamily members (PubMed:25512613). Besides its function of transcription factor, acts as a cofactor of CEBPB to activate CEBPA and promote adipocyte differentiation (PubMed:24216764). Regulates centrosome dynamics in a cell-cycle- and centriole-age-dependent manner. Forms 9-foci symmetrical ring scaffold around the mother centriole to control centrosome function and the interaction between centrioles and pericentriolar material (PubMed:26213385).
Cellular Location	Cytoplasm. Nucleus {ECO:0000255|PROSITE-ProRule:PRU00978, ECO:0000269|PubMed:15358120, ECO:0000269|PubMed:22528486}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Note=Actively transported to the centrosome and accumulated in the pericentriolar material (PCM) during G1 to M phase via a microtubule-dependent mechanism. During late telophase and cytokinesis, translocates from the centrosome to the midbody
Tissue Location	Widely expressed with higher expression levels in liver.

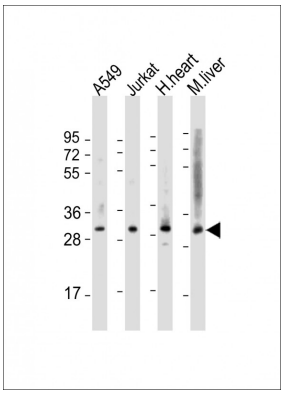
Background

Transcriptional activator which binds the cAMP response element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), a sequence present in many viral and cellular promoters and blocks the differentiation of neuroprogenitor cells into neurons. Its transcriptional activity is enhanced by CCND3 and slightly inhibited by CDK4.

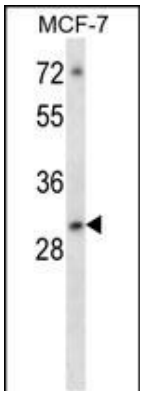
References

Wei, Y., et al. J. Biochem. 148(2):171-178(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Tomppo, L., et al. Biol. Psychiatry 65(12):1055-1062(2009)
Li, G., et al. Mol. Cancer Res. 7(6):933-943(2009)
Uekusa, H., et al. Biochem. Biophys. Res. Commun. 380(3):673-678(2009)

Images



All lanes : Anti-ATF5 Antibody (C-term) at 1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: human heart lysate Lane 4: mouse liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 31 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



ATF5 Antibody (C-term) (Cat. #AP14991b) western blot analysis in MCF-7 cell line lysates (35ug/lane).This demonstrates the ATF5 antibody detected the ATF5 protein (arrow).