

# ATF-5 (Acetyl Lys29) Polyclonal Antibody

Catalog # AP63221

#### **Product Information**

**Application WB Primary Accession Q9Y2D1** 

Reactivity Human, Mouse, Rat

Host Rabbit Clonality **Polyclonal** Calculated MW 30674

### **Additional Information**

Gene ID 22809

**Other Names** ATF5; ATFX; Cyclic AMP-dependent transcription factor ATF-5;

cAMP-dependent transcription factor ATF-5; Activating transcription factor 5;

Transcription factor ATFx

**Dilution** WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other

applications.

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium **Format** 

azide.

**Storage Conditions** -20°C

#### **Protein Information**

Name ATF5

**ATFX Synonyms** 

**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 antiapoptotic 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

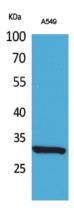
**Tissue Location** 

Widely expressed with higher expression levels in liver.

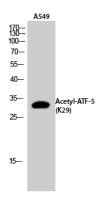
# Background

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: 21212266, PubMed: 20654631). 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: 22528486, PubMed: 18701499). 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: <u>25512613</u>). 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).

## **Images**



Western Blot analysis of A549 cells using Acetyl-ATF-5 (K29) Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Western Blot analysis of A549 cells using Acetyl-ATF-5 (K29) Polyclonal Antibody. Secondary antibody was diluted at 1:20000

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