SunLong Biotech Co.,LTD
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Rabbit Anti-ATF2 antibody

SL0518R

Product Name	ATF2
Chinese Name	活化复制因子 2 抗体
Alias	CREB 2; HB 16; Activating Transcription Factor 2; ATF 2; Atf-2; ATF2 protein; cAMP Response Element Binding Protein 2; cAMP response element binding protein CRE BP1; cAMP-dependent transcription factor ATF-2; cAMP-responsive element-binding protein 2; CRE BP1; CRE-BP; CREB 2; CREB2; CREBP1; Cyclic AMP dependent transcription factor ATF 2; Cyclic AMP-responsive element-binding protein 2; HB 16; HB16; ATF2_HUMAN.
Research Area	Cell biology transcriptional regulatory factor
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat,
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	55kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human ATF2: 188-255/505
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

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Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Product Detail

ATF2 is a member of the ATF/CREB family of basic region leucine zipper DNA binding proteins that regulates transcription by binding to a consensus cAMP response element (CRE) in the promoter of various viral and cellular genes. Many of these genes are important in cell growth and differentiation, and in stress and immune responses. ATF2 is a nuclear protein that binds DNA as a dimer and can form dimers with members of the ATF/CREB and Jun/Fos families. It is a stronger activator as a heterodimer with cJun than as a homodimer. Several isoforms of ATF2 arise by differential splicing. The stable native full length ATF2 is transcriptionally inactive as a result of an inhibitory direct intramolecular interaction of its carboxy terminal DNA binding domain with the amino terminal transactivation domain. Following dimerization ATF2 becomes a short lived protein that undergoes ubiquitination and proteolysis, seemingly in a protein phosphatase-dependent mechanism. Stimulation of the transcriptional activity of ATF2 occurs following cellular stress induced by several genotoxic agents, inflammatory cytokines, and UV irradiation. This activation requires phosphorylation of two threonine residues in ATF2 by both JNK/SAP kinase and p38 MAP kinase. ATF2 is abundantly expressed in brain.

Function:
Transcriptional activator, probably constitutive, which binds to the cAMP-responsive element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), a sequence present in many viral and cellular promoters. Interaction with JUN redirects JUN to bind to CRES preferentially over the 12-O-tetradecanoylphorbol-13-acetate response elements (TRES) as part of an ATF2/JUN complex.

Subunit:
Binds DNA as a dimer and can form a homodimer in the absence of DNA. Can form a heterodimer with JUN. Interacts with SMAD3 and SMAD4. Binds through its N-terminal region to UTF1 which acts as a coactivator of ATF2 transcriptional activity.

Subcellular Location:
Nucleus.

Tissue Specificity:
Abundant expression seen in the brain.

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.

Similarity:
Belongs to the bZIP family. ATF subfamily.
Contains 1 bZIP domain.
Contains 1 C2H2-type zinc finger.

SWISS:
P15336

Gene ID:
1386

Database links:

Entrez Gene: 1386 Human

Entrez Gene: 100047997 Mouse

Entrez Gene: 11909 Mouse

Entrez Gene: 81647 Rat

Omim: 123811 Human

SwissProt: P15336 Human

SwissProt: P16951 Mouse

SwissProt: Q00969 Rat

Unigene: 592510 Human

Unigene: 209903 Mouse

Unigene: 9825 Rat

transcriptional regulatory factor（Transcriptin Regulators）
活化复制因子-2(属于 activation transcription factor/cAMP responsive element binding protein 家族)是真核细胞转录因子，同属于 ATF/CREB 家族。参与由 cAMP 或某些病毒蛋白质所诱导基因转录的调节.

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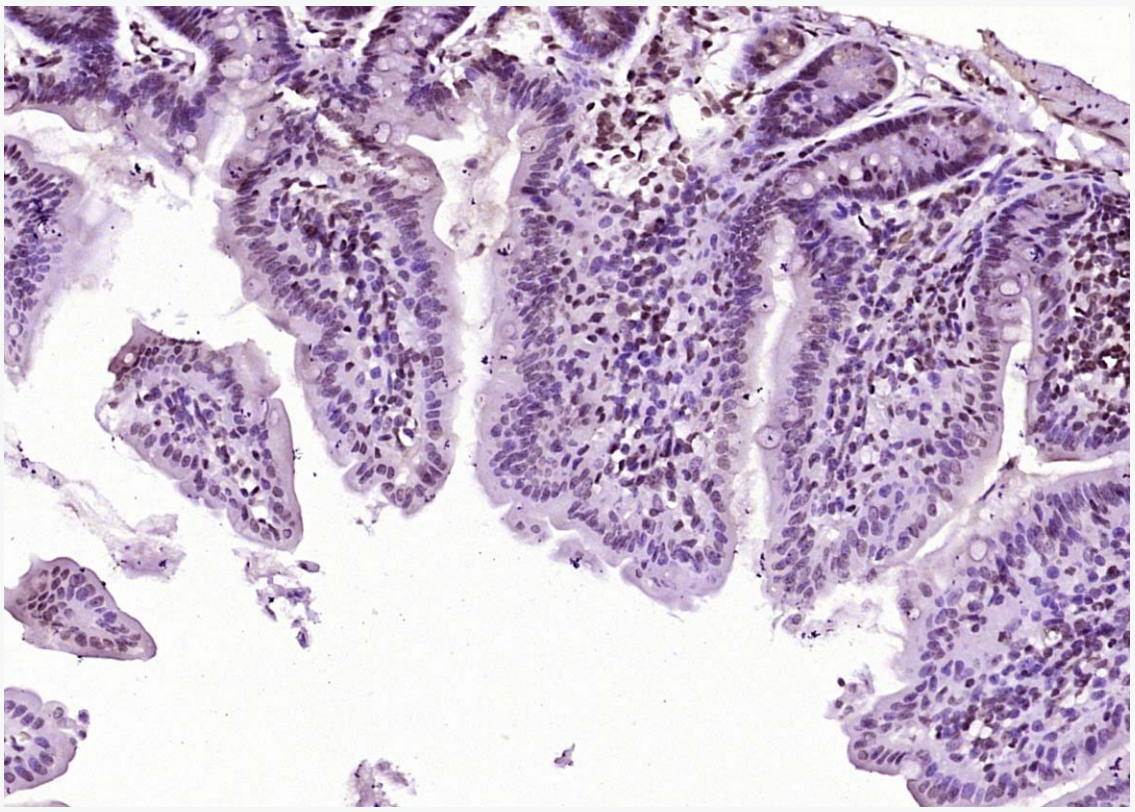
Product Picture



Paraformaldehyde-fixed, paraffin embedded (Mouse intestine); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF2) Polyclonal Antibody, Unconjugated (SL0518R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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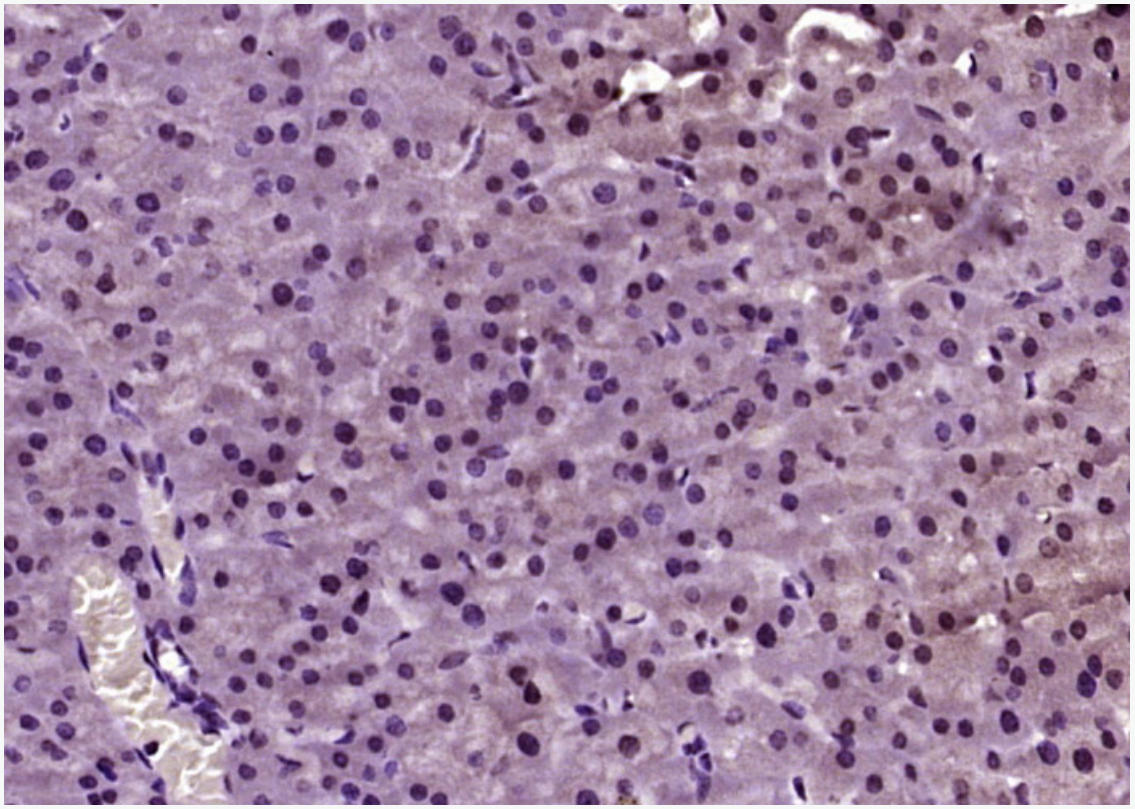

Paraformaldehyde-fixed, paraffin embedded (Mouse pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF2) Polyclonal Antibody, Unconjugated (SL0518R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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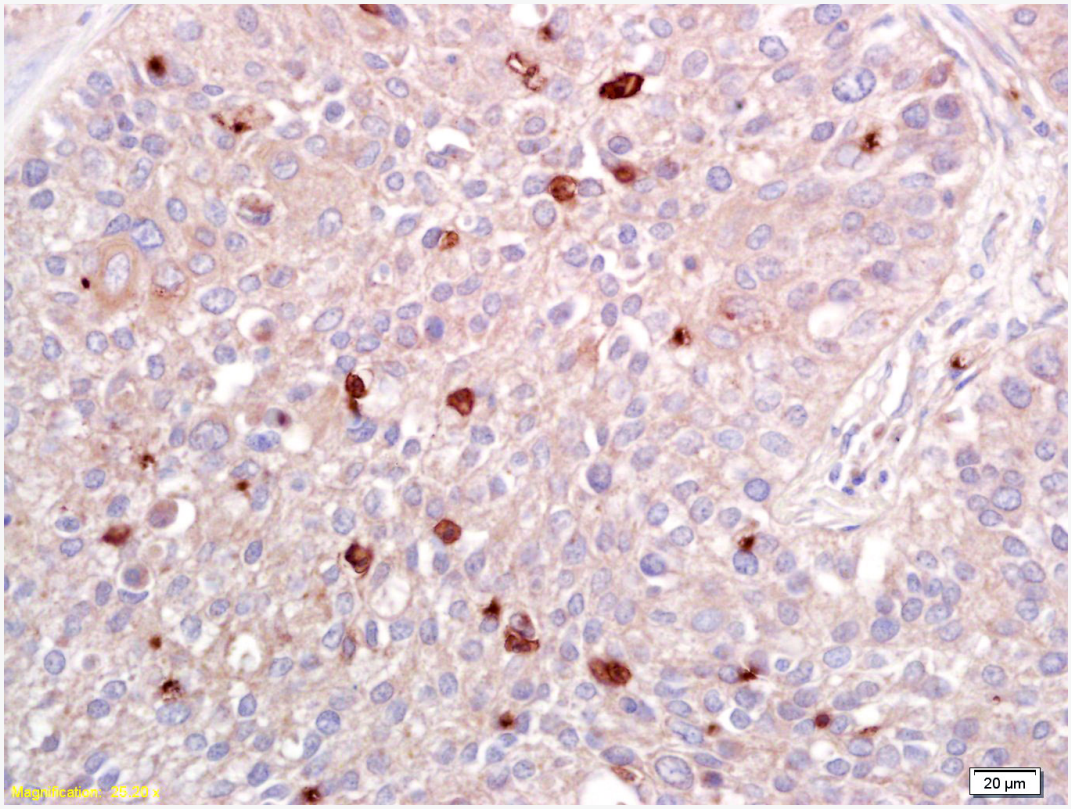

Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-ATF2 Polyclonal Antibody, Unconjugated(SL0518R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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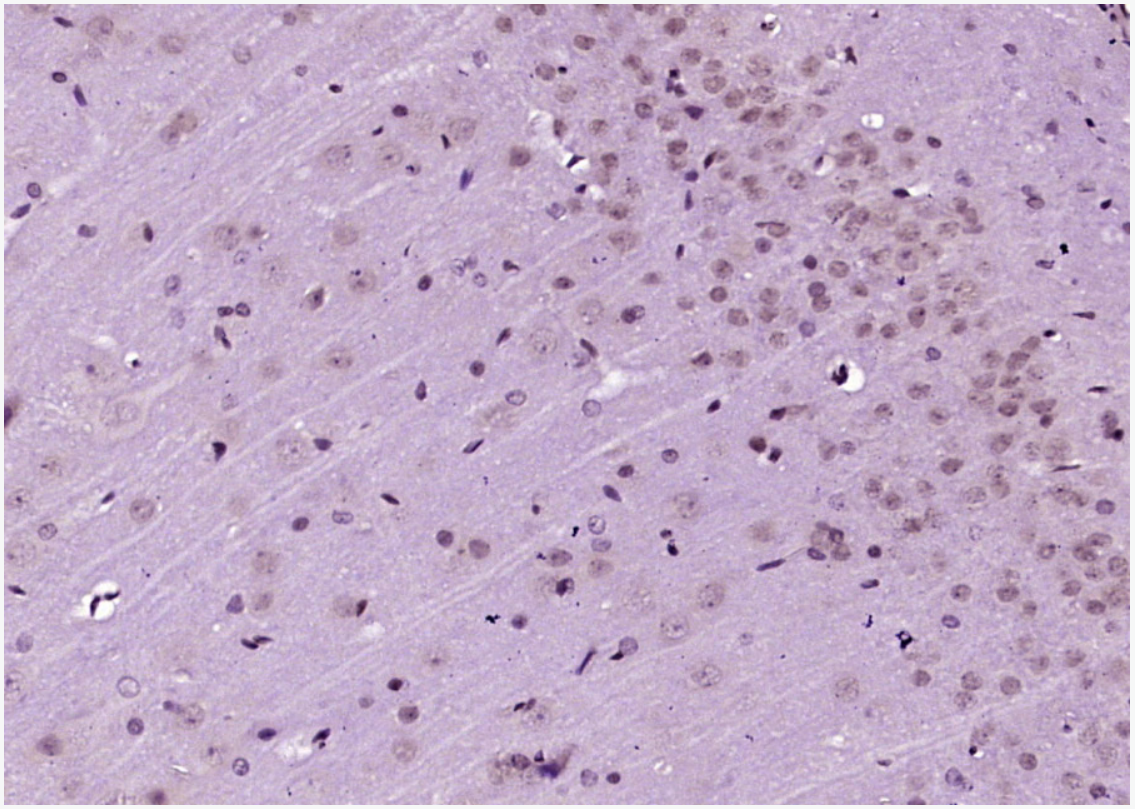

Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF2) Polyclonal Antibody, Unconjugated (SL0518R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.