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antibody and ELISA experts

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Anti-ATF2 Antibody Picoband™

Catalog Number: PB9131

About ATF2

ATF2, also known as Activating transcription factor 2, is a protein that in humans is encoded by the ATF2 gene. It is mapped to 2q31.1. This gene encodes a transcription factor that is a member of the leucine zipper family of DNA-binding proteins. This protein binds to the cAMP-responsive element (CRE), an octameric palindrome. The protein forms a homodimer or heterodimer with c-Jun and stimulates CRE-dependent transcription. The protein is also a histone acetyltransferase (HAT) that specifically acetylates histones H2B and H4 in vitro, thus, it may represent a class of sequence-specific factors that activate transcription by direct effects on chromatin components. Additional transcript variants have been identified but their biological validity has not been determined.

Overview

Product Name	Anti-ATF2 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ATF2 Antibody Picoband™ catalog # PB9131. Tested in Flow Cytometry, IHC, IHC-F, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, IHC-F, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P15336

Technical Details

Immunogen	E.coli-derived human ATF2 recombinant protein (Position: E93-E450). Human ATF2 shares 99% amino acid (aa) sequence identity with both mouse and rat ATF2.
Predicted Reactive Species	Bovine, Canine, Chicken, Drosophila, Hamster, Horse, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Mouse, Rat Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-ATF2 Antibody Picoband™ (PB9131) Images

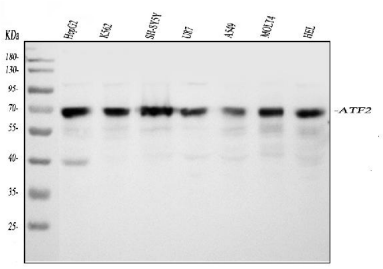

Figure 1. Western blot analysis of ATF2 using anti-ATF2 antibody (PB9131).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human SH-SY5Y whole cell lysates,
Lane 4: human U87 whole cell lysates,
Lane 5: human A549 whole cell lysates,
Lane 6: human MOLT4 whole cell lysates,
Lane 7: human HEL whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ATF2 antigen affinity purified polyclonal antibody (Catalog # PB9131) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ATF2 at approximately 65-70 kDa. The expected band size for ATF2 is at 65-70 kDa.

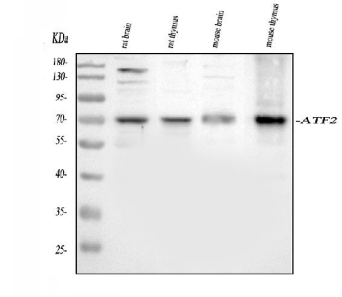

Figure 2. Western blot analysis of ATF2 using anti-ATF2 antibody (PB9131).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat brain tissue lysates,
Lane 2: rat thymus tissue lysates,
Lane 3: mouse brain tissue lysates,
Lane 4: mouse thymus tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ATF2 antigen affinity purified polyclonal antibody (Catalog # PB9131) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ATF2 at approximately 65-70 kDa. The expected band size for ATF2 is at 65-70 kDa.

Figure 3. IHC analysis of ATF2 using anti-ATF2 antibody (PB9131).

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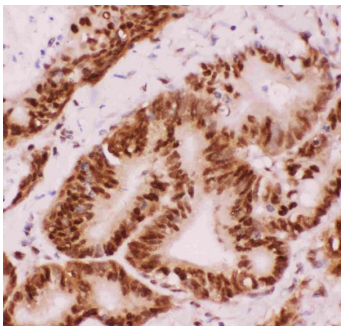

ATF2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ATF2 Antibody (PB9131) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

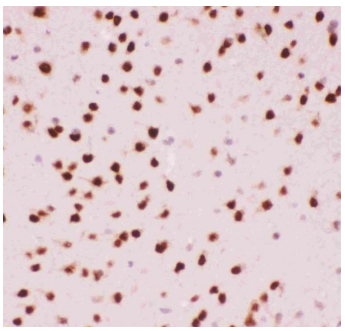

Figure 4. IHC analysis of ATF2 using anti-ATF2 antibody (PB9131).
ATF2 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ATF2 Antibody (PB9131) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

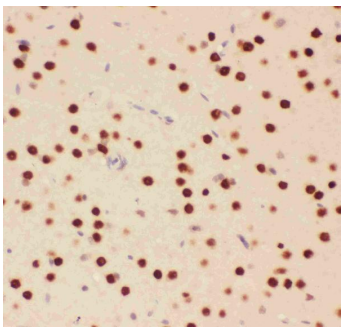

Figure 5. IHC analysis of ATF2 using anti-ATF2 antibody (PB9131).
ATF2 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ATF2 Antibody (PB9131) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

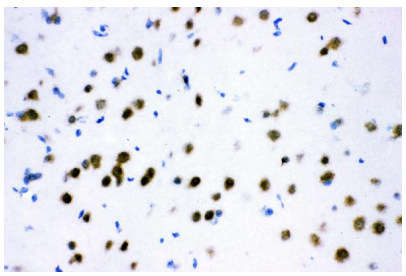

Figure 6. IHC analysis of ATF2 using anti-ATF2 antibody (PB9131).
ATF2 was detected in frozen section of rat brain tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ATF2 Antibody (PB9131) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 7. IHC analysis of ATF2 using anti-ATF2 antibody (PB9131).
ATF2 was detected in frozen section of mouse brain tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ATF2 Antibody (PB9131) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and

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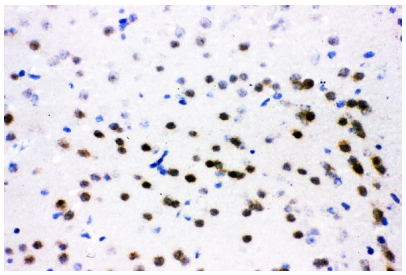

incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

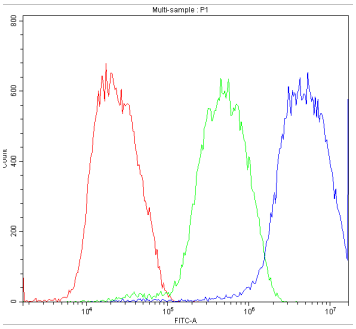

Figure 8. Flow Cytometry analysis of K562 cells using anti-ATF2 antibody (PB9131).
Overlay histogram showing K562 cells stained with PB9131 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ATF2 Antibody (PB9131,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

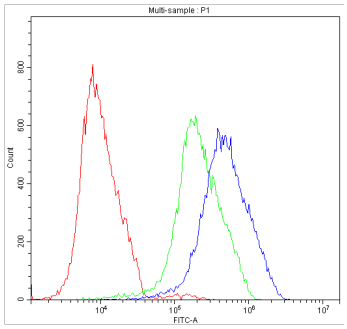

Figure 9. Flow Cytometry analysis of HepG2 cells using anti-ATF2 antibody (PB9131).
Overlay histogram showing HepG2 cells stained with PB9131 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ATF2 Antibody (PB9131,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1 Publications Citing This Product

1. PubMed ID: 33856409, Wu T,Liu Q,Li Y,Li H,Chen L,Yang X,Tang Q,Pu S,Kuang J,Li R,Huang Y,Zhang J,Zhang Z,Zhou J,Huang C,Zhang G,Zhao Y,Zou M,Jiang W,Mo L,He J.Feeding-induced hepatokine, Manf, ameliorates diet-induced obesity by promoting adipose browning via p38 MAPK pathway.J Exp Med.2021 Jun 7;218(6):e20201203.doi:10. 1084/jem. 20201203.PMID:33856409.

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