10320 Camino Santa Fe, Suite G
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Anti-ATF1 Antibody Picoband™(monoclonal, 7F8)

Catalog # ABO14912

Specification

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Product Information

Application	**WB, IHC, IF, ICC, FC**
Primary Accession	P18846
Host	**Mouse**
Isotype	**Mouse IgG2a**
Reactivity	**Human**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-ATF1 Antibody Picoband™ (monoclonal, 7F8) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Additional Information

Gene ID 466

Other Names
Cyclic AMP-dependent transcription factor ATF-1, cAMP-dependent transcription factor ATF-1, Activating transcription factor 1, Protein TREB36, ATF1

Calculated MW
38 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human
 Immunocytochemistry/Immunofluorescence, 2 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Protein Name
activating transcription factor 1

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen
E.coli-derived human ATF1 recombinant protein (Position: M1-V271). Human ATF1 shares 91% amino acid (aa) sequence identity with mouse ATF1.

Purification
Immunogen affinity purified.

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Cross Reactivity
No cross-reactivity with other proteins.

Storage

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.

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Protein Information

Name ATF1

Function
This protein binds the cAMP response element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), a sequence present in many viral and cellular promoters. Binds to the Tax-responsive element (TRE) of HTLV-I. Mediates PKA-induced stimulation of CRE-reporter genes. Represses the expression of FTH1 and other antioxidant detoxification genes. Triggers cell proliferation and transformation.

Cellular Location
Nucleus.

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Images

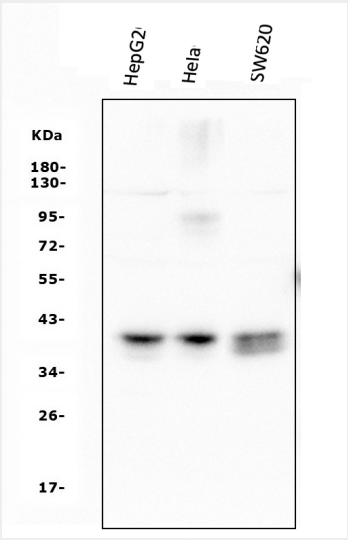

Figure 1. Western blot analysis of ATF1 using anti-ATF1 antibody (M01600-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates;
Lane 2: human Hela whole cell lysates;
Lane 3: human SW620 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-ATF1 antigen affinity purified monoclonal antibody (Catalog # M01600-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for ATF1 at approximately 38KD. The expected band size for ATF1 is at 38KD.

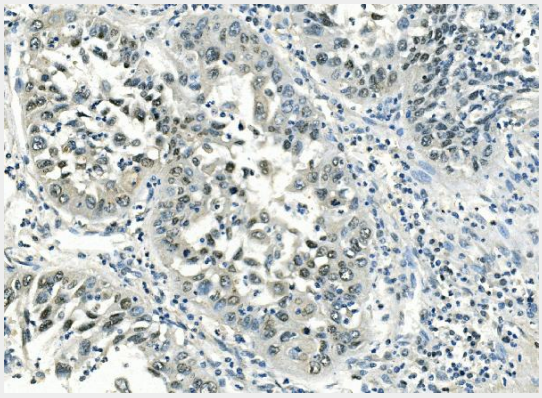

Figure 2. IHC analysis of ATF1 using anti-ATF1 antibody (M01600-1).
ATF1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-ATF1 Antibody (M01600-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

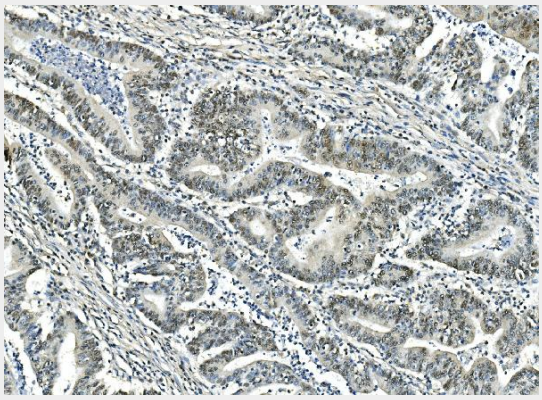

Figure 3. IHC analysis of ATF1 using anti-ATF1 antibody (M01600-1).
ATF1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-ATF1 Antibody (M01600-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was

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used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

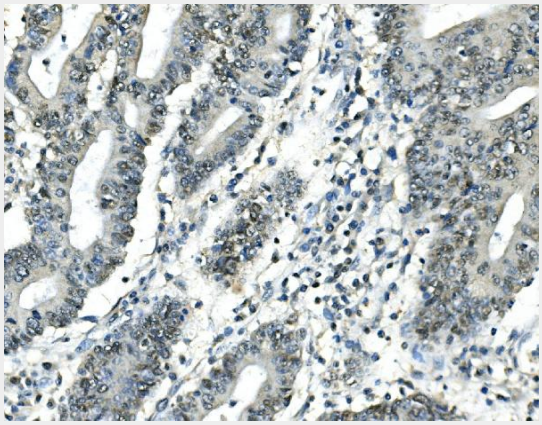

Figure 4. IHC analysis of ATF1 using anti-ATF1 antibody (M01600-1).
ATF1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-ATF1 Antibody (M01600-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

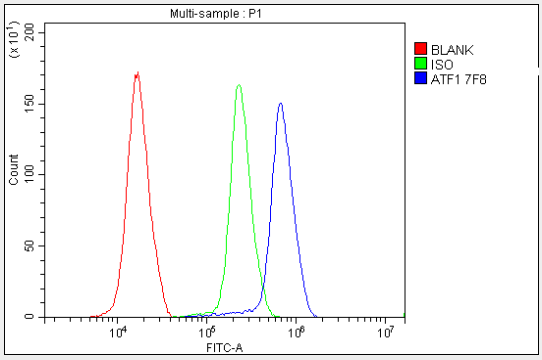

Figure 5. Flow Cytometry analysis of K562 cells using anti-ATF1 antibody (M01600-1).
Overlay histogram showing K562 cells stained with M01600-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ATF1 Antibody (M01600-1, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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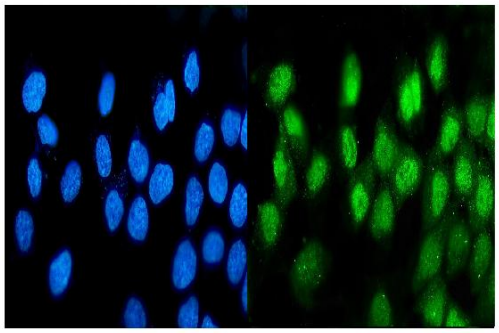

Figure 6. IF analysis of ATF1 using anti-ATF1 antibody (M01600-1).
ATF1 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2 µg/mL mouse anti-ATF1 Antibody (M01600-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Anti-ATF1 Antibody Picoband™(monoclonal, 7F8) - Background

ATF1, also known as activating transcription factor 1, is a protein that in humans is encoded by the ATF1 gene. It is mapped to 12q13.12. This gene encodes an activating transcription factor, which belongs to the ATF subfamily and bZIP (basic-region leucine zipper) family. It influences cellular physiologic processes by regulating the expression of downstream target genes, which are related to growth, survival, and other cellular activities. This protein is phosphorylated at serine 63 in its kinase-inducible domain by serine/threonine kinases, cAMP-dependent protein kinase A, calmodulin-dependent protein kinase I/II, mitogen- and stress-activated protein kinase and cyclin-dependent kinase 3 (cdk-3). Its phosphorylation enhances its transactivation and transcriptional activities, and enhances cell transformation.