

Anti-TORC1/CRTC1 Antibody Picoband™

Catalog Number: A01951-2

About CRTC1

CRTC1 (CREB-Regulated Transcription Coactivator 1), also known as MECT1, TORC1 or KIAA0616, is a protein that in humans is encoded by the CRTC1 gene. By sequence analysis, Tonon et al. (2003) mapped the CRTC1 gene to chromosome 19p13. Kovacs et al. (2007) found that Torc1 was expressed in adult mouse brain and cultured neurons, and that it translocated to the nucleus upon concomitant activation of calcium and cAMP signaling pathways. Mair et al. (2011) demonstrated that CRTC1 is a direct AMPK target, and interacts with the CREB homolog-1 (CRH1) transcription factor in vivo. The prolongevity effects of activating AMPK or deactivating calcineurin decrease CRTC1 and CRH1 activity and induce transcriptional responses similar to those of CRH1-null worms.

Overview

Product Name	Anti-TORC1/CRTC1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-TORC1/CRTC1 Antibody Picoband™ catalog # A01951-2. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	Q6UUV9

Technical Details

Immunogen	E.coli-derived human TORC1/CRTC1 recombinant protein (Position: E30-E568).
Predicted Reactive Species	Human
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).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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, 0.25-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Flow Cytometry, 1-3ug/1x10⁶ cells, Human Direct ELISA, 0.1-0.5ug/ml, Human

Anti-TORC1/CRTC1 Antibody Picoband™ (A01951-2) Images

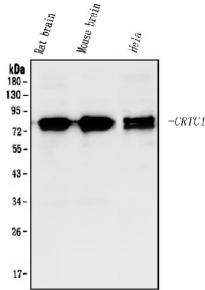


Figure 1. Western blot analysis of TORC1/CRTC1 using anti-TORC1/CRTC1 antibody (A01951-2).

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: rat brain tissue lysates,

Lane 2: mouse brain tissue lysates,

Lane 3: human Hela 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 rabbit anti-TORC1/CRTC1 antigen affinity purified polyclonal antibody (Catalog # A01951-2) 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 TORC1/CRTC1 at approximately 78KD. The expected band size for TORC1/CRTC1 is at 78KD.

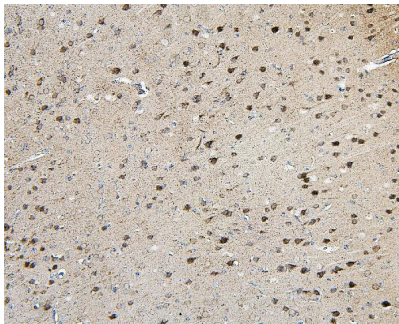


Figure 2. IHC analysis of TORC1/CRTC1 using anti-TORC1/CRTC1 antibody (A01951-2).

TORC1/CRTC1 was detected in paraffin-embedded section of mouse brain 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 1ug/ml rabbit anti-TORC1/CRTC1 Antibody (A01951-2) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

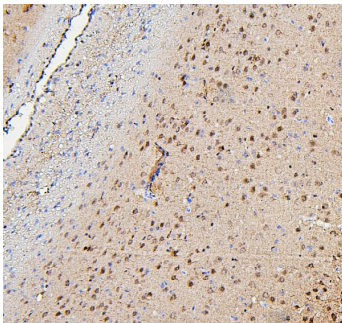
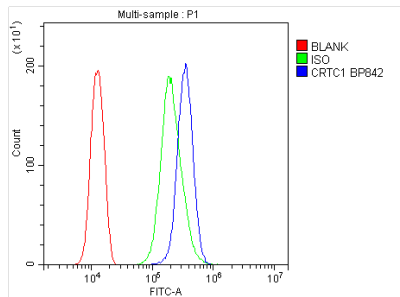


Figure 3. IHC analysis of TORC1/CRTC1 using anti-TORC1/CRTC1 antibody (A01951-2).

TORC1/CRTC1 was detected in paraffin-embedded section of rat brain 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 1ug/ml rabbit anti-TORC1/CRTC1 Antibody (A01951-2) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. Flow Cytometry analysis of U20S cells using anti-TORC1/CRTC1 antibody (A01951-2).



Overlay histogram showing U2OS cells stained with A01951-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TORC1/CRTC1 Antibody (A01951-2, 1 μ g/1 $\times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 μ g/1 $\times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 μ g/1 $\times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

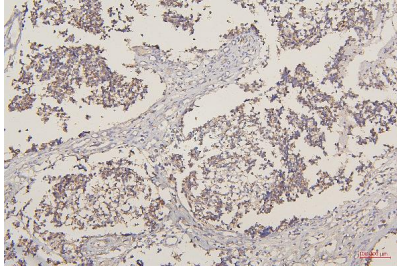


Figure 5. IHC analysis of TORC1/CRTC1 using anti-TORC1/CRTC1 antibody (A01951-2). TORC1/CRTC1 was detected in paraffin-embedded section of human glioma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-TORC1/CRTC1 Antibody (A01951-2) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

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