

Anti-TORC1 Antibody
Catalog # ABO11295**Specification**

Anti-TORC1 Antibody - Product Information

Application	WB
Primary Accession	Q6UUV9
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for CREB-regulated transcription coactivator 1(CRTC1) detection. Tested with WB in Human;Rat.

Reconstitution

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

Anti-TORC1 Antibody - Additional Information

Gene ID 23373

Other Names

CREB-regulated transcription coactivator 1, Mucoepidermoid carcinoma translocated protein 1, Transducer of regulated cAMP response element-binding protein 1, TORC-1, Transducer of CREB protein 1, CRTC1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=16062)
HGNC:16062

Calculated MW

67300 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization

Cytoplasm. Nucleus. Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (By similarity). Translocated to the nucleus on Ser-151 dephosphorylation, instigated by a number of factors including calcium ion and cAMP levels. Light stimulation triggers a nuclear accumulation in the suprachiasmatic nucleus (SCN) of the brain. .

Tissue Specificity

Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart, spleen, lung, skeletal muscle, salivary gland, ovary and kidney. .

Protein Name

CREB-regulated transcription coactivator 1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human TORC1(506-521aa EQQMAARQANALSHQL), different from the related rat and mouse sequences by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the TORC family.

Anti-TORC1 Antibody - Protein Information

Name CRTC1 ([HGNC:16062](#))

Function

Transcriptional coactivator for CREB1 which activates transcription through both consensus and variant cAMP response element (CRE) sites. Acts as a coactivator, in the SIK/TORC signaling pathway, being active when dephosphorylated and acts independently of CREB1 'Ser-133' phosphorylation. Enhances the interaction of CREB1 with TAF4. Regulates the expression of specific CREB-activated genes such as the steroidogenic gene, StAR. Potent coactivator of PGC1alpha and inducer of mitochondrial biogenesis in muscle cells. In the hippocampus, involved in late-phase long-term potentiation (L-LTP) maintenance at the Schaffer collateral-CA1 synapses. May be required for dendritic growth of developing cortical neurons (By similarity). In concert with SIK1, regulates the light-induced entrainment of the circadian clock. In response to light stimulus, coactivates the CREB-mediated transcription of PER1 which plays an important role in the photic entrainment of the circadian clock.

Cellular Location

Cytoplasm. Nucleus. Note=Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (PubMed:16817901) Translocated to the nucleus on Ser-151 dephosphorylation, instigated by a number of factors including calcium ion and cAMP levels (PubMed:15589160). Light stimulation triggers a nuclear accumulation in the suprachiasmatic nucleus (SCN) of the brain (By similarity) {ECO:0000250|UniProtKB:Q68ED7, ECO:0000269|PubMed:15589160, ECO:0000269|PubMed:16817901}

Tissue Location

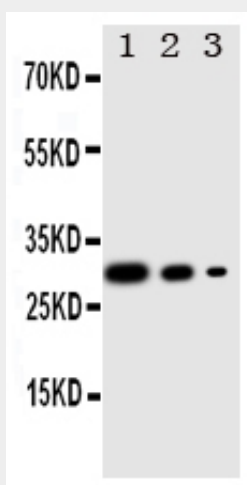
Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart, spleen, lung, skeletal muscle, salivary gland, ovary and kidney.

Anti-TORC1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-TORC1 Antibody - Images



Anti-TORC1 antibody, ABO11295, Western blotting Recombinant Protein Detection Source: E.coli derived -recombinant Human CRTC1, 29.5KD(162aa tag+ L460-Y568) Lane 1: Recombinant Human CRTC1 Protein 10ng Lane 2: Recombinant Human CRTC1 Protein 5ng Lane 3: Recombinant Human CRTC1 Protein 2.5ng

Anti-TORC1 Antibody - Background

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 longevity effects of activating AMPK or deactivating calcineurin decrease CRTC1 and CRH1 activity and induce transcriptional responses similar to those of CRH1-null worms.