



Rabbit Anti-TORC2 antibody

SL3590R

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| Product Name: | TORC2 |
| Chinese Name: | CREB转录共激活因子TORC2抗体 |
| Alias: | CREB regulated transcription coactivator 2; CRTC2; RP11-422P24.6; TORC-2; Transducer of CREB protein 2; Transducer of regulated cAMP response element-binding protein; Transducer of regulated cAMP response element-binding protein (CREB) 2; Transducer of regulated cAMP response element-binding protein 2; Transducer of regulated CREB protein 2; CRTC2 HUMAN. |
| Organism Species: | Rabbit |
| Clonality: | Polyclonal |
| React Species: | Human,Mouse,Rat,Dog,Pig,Cow, |
| Applications: | WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user. |
| Molecular weight: | 76kDa |
| Cellular localization: | The nucleuscytoplasmic |
| Form: | Lyophilized or Liquid |
| Concentration: | 1mg/ml |
| immunogen: | KLH conjugated synthetic peptide derived from human CREB regulated transcription coactivator 2:131-230/693 |
| Lsotype: | IgG |
| Purification: | affinity purified by Protein A |
| Storage Buffer: | 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol. |
| Storage: | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |
| PubMed: | PubMed |
| Product Detail: | This gene encodes a member of the transducers of regulated cAMP response element-binding protein activity family of transcription coactivators. These proteins promote the |

transcription of genes targeted by the cAMP response element-binding protein, and therefore play an important role in many cellular processes. Under basal conditions the encoded protein is phosphorylated by AMP-activated protein kinase or the salt-inducible kinases and is sequestered in the cytoplasm. Upon activation by elevated cAMP or calcium, the encoded protein translocates to the nucleus and increases target gene expression. Single nucleotide polymorphisms in this gene may increase the risk of type 2 diabetes. A pseudogene of this gene is located on the long arm of chromosome 5. [provided by RefSeq, Dec 2010].

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 gluconeogenesis as a component of the LKB1/AMPK/TORC2 signaling pathway. Regulates the expression of specific genes such as the steroidogenic gene, StAR. Potent coactivator of PPARGC1A and inducer of mitochondrial biogenesis in muscle cells. Also coactivator for TAX activation of the human T-cell leukemia virus type 1 (HTLV-1) long terminal repeats (LTR).

Subunit:

Binds, as a tetramer, through its N-terminal region, with the bZIP domain of CREB1. 'Arg-314' in the bZIP domain of CREB1 is essential for this interaction. Interaction, via its C-terminal, with TAF4, enhances recruitment of TAF4 to CREB1. Interacts with PPP3CA/calcineurin alpha, SIK2 and 14-3-3 proteins, YWHAB and YWHAG. Interaction with the human T-cell leukemia virus type 1 (HTLV-1) Tax protein is essential for optimal transcription activation by Tax. Interaction with RFWD2/COP1 mediates nuclear export and degradation of CRTC2.

Subcellular Location:

Cytoplasm. Nucleus. Note=Translocated from the nucleus to the cytoplasm on interaction of the phosphorylated form with 14-3-3 protein. In response to cAMP levels and glucagon, relocated to the nucleus.

Tissue Specificity:

Most abundantly expressed in the thymus. Present in both B and T-lymphocytes. Highly expressed in HEK293T cells and in insulinomas. High levels also in spleen, ovary, muscle and lung, with highest levels in muscle. Lower levels found in brain, colon, heart, kidney, prostate, small intestine and stomach. Weak expression in liver and pancreas.

Post-translational modifications:

Phosphorylation/dephosphorylation states of Ser-171 are required for regulating transduction of CREB activity. TORCs are inactive when phosphorylated, and active when dephosphorylated at this site. This primary site of phosphorylation, is regulated by cAMP and calcium levels and is dependent on the phosphorylation of SIKs (SIK1 and

SIK2) by LKB1. Both insulin and AMPK increase this phosphorylation of CRTC2 while glucagon suppresses it. Phosphorylation at Ser-274 by MARK2 is induced under low glucose conditions and dephosphorylated in response to glucose influx. Phosphorylation at Ser-274 promotes interaction with 14-3-3 proteins and translocation to the cytoplasm.

Similarity:

Belongs to the TORC family.

SWISS:

Q53ET0

Gene ID:

200186

Database links:

[Entrez Gene: 200186](#)Human

[Entrez Gene: 74343](#)Mouse

[Entrez Gene: 310615](#)Rat

[Omim: 608972](#)Human

[SwissProt: Q53ET0](#)Human

[SwissProt: Q3U182](#)Mouse

[SwissProt: Q3LRZ1](#)Rat

[Unigene: 406392](#)Human

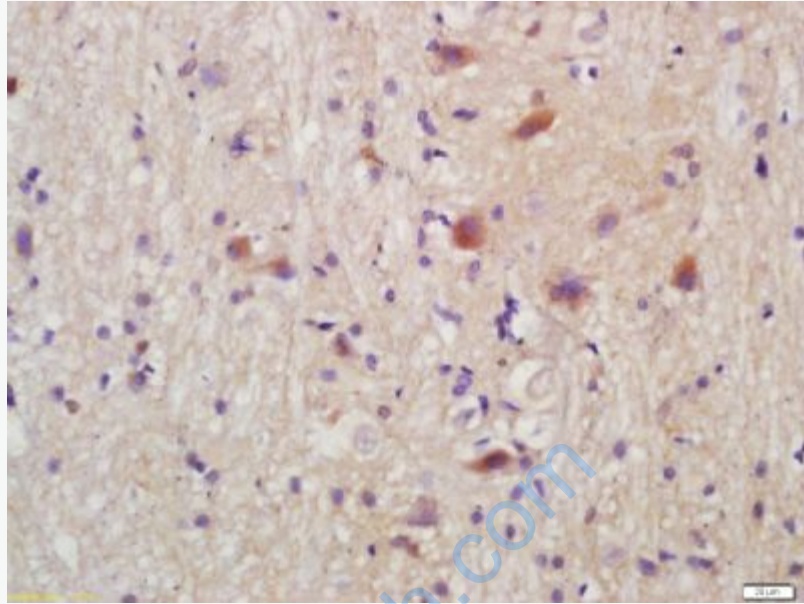
[Unigene: 35627](#)Mouse

[Unigene: 13599](#)Rat

Important Note:

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

CREB转录共激活因子TORC2又称葡萄糖关键调控蛋白TORC-2。



Picture:

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, 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°C for 20 min;
Incubation: Anti-TORC2 Polyclonal Antibody, Unconjugated(SL3590R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining