

Rabbit TORC2 Polyclonal Antibody | anti-TORC2 antibody

Phospho-TORC2 (Ser275) Antibody

CATALOG # AAA329243	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry
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PRODUCT SYNONYMS

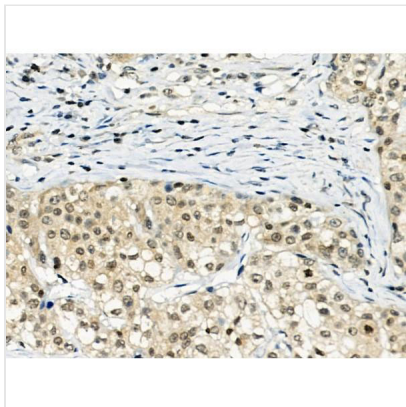
TORC2; Polyclonal Antibody; Phospho-TORC2 (Ser275) Antibody; CREB regulated transcription coactivator 2; CREB-regulated transcription coactivator 2; CRTC2; CRTC2_HUMAN; RP11-422P24.6; TORC-2; torc2; Transducer of CREB protein 2; Transducer of regulated cAMP response element-binding protein; Transducer of regulated cAMP response element-binding protein (CREB) 2; Transducer of regulated cAMP response element-binding protein 2; Transducer of regulated CREB protein 2; anti-TORC2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-TORC2 (Ser275) Antibody detects endogenous levels of TORC2 only when phosphorylated at Ser275. 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-TORC2 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human TORC2 around the phosphorylation site of Ser275.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylation/dephosphorylation states of Ser-171 are required for regulating transduction of CREB activity. CRTC2s/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. Following adenylyl cyclase activation, dephosphorylated at Ser-171 by PPP3CA/calcineurin A resulting in CRTC2 dissociation from 14-3-3 proteins and PPP3CA (By similarity). 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. Asymmetric dimethylation of arginine residues by PRMT6 enhances the association of CRTC2 with CREB on the promoters of gluconeogenic genes.

Subunit Structure	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 SIK2. Interacts with 14-3-3 proteins, YWHAB and YWHAG. Interacts (probably when phosphorylated at Ser-171) with YWHAЕ. Interacts with calmodulin-dependent catalytic subunit PPP3CA/calcineurin A. Interaction with COP1 mediates nuclear export and degradation of CRTC2 (By similarity). (Microbial infection) Interaction with the human T-cell leukemia virus type 1 (HTLV-1) Tax protein is essential for optimal transcription activation by Tax.
Similarity	Belongs to the TORC family.
Subcellular Location	Cytoplasm. Nucleus. Note: Translocated from the nucleus to the cytoplasm on interaction of the phosphorylated form with 14-3-3 protein (PubMed:15454081). In response to cAMP levels and glucagon, relocated to the nucleus (PubMed:15454081).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

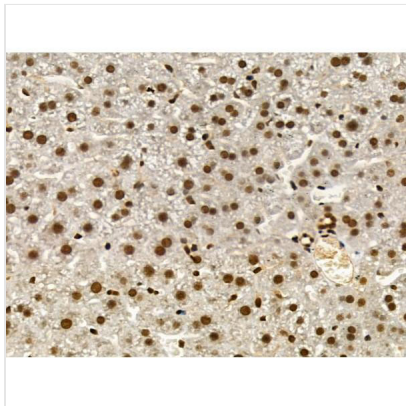
IMAGES



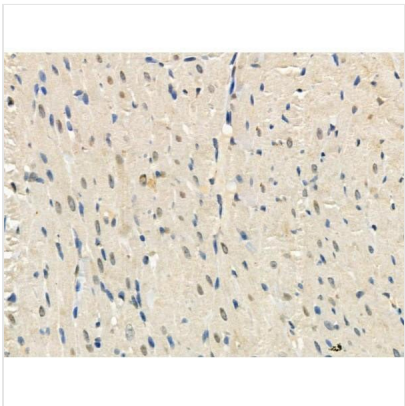
IHC (Immunohistochemistry)
At 1/100 staining Human pancreatic cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)
At 1/100 staining Mouse heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
Staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
At 1/100 staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-TORC2 antibody	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).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	32171215
NCBI GeneID	200186
NCBI Accession #	NP_859066
NCBI GenBank Nucleotide #	NM_181715.2
UniProt Accession #	Q53ET0; Q6UUU8; Q7Z3X7; Q8N332
Molecular Weight	Predicted: 67; 76 kDa Observed: 70 kDa
NCBI Official Full Name	CREB-regulated transcription coactivator 2
NCBI Official Synonym Full Names	CREB regulated transcription coactivator 2
NCBI Official Symbol	CRTC2
NCBI Official Synonym Symbols	TORC2; TORC-2
NCBI Protein Information	CREB-regulated transcription coactivator 2; transducer of regulated cAMP response element-binding protein (CREB) 2
UniProt Protein Name	CREB-regulated transcription coactivator 2
UniProt Gene Name	CRTC2
UniProt Synonym Gene Names	TORC2; TORC-2; Transducer of CREB protein 2
UniProt Entry Name	CRTC2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/torc2-antibody-peptide-elisa-immunohistochemistry-elisa/329243>