

Immunotag™ TORC2 Monoclonal Antibody

Antibody Specification	
Catalog No.	ITM0625
Product Description	Immunotag™ TORC2 Monoclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	TORC2
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB,IHC-p,IF,FCM,ELISA
Recommended Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human,Monkey
Host Species	Mouse
Immunogen	Purified recombinant fragment of human TORC2 expressed in E. Coli.
Specificity	TORC2 Monoclonal Antibody detects endogenous levels of TORC2 protein.
Purification	Affinity purification
Form	Ascitic fluid containing 0.03% sodium azide.
Gene Name	CRTC2
Accession No.	Q53ET0 Q3U182
Alternate Names	CRTC2; TORC2; CREB-regulated transcription coactivator 2; Transducer of regulated cAMP response element-binding protein 2; TORC-2; Transducer of CREB protein 2

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Description	CREB regulated transcription coactivator 2(CRTC2) Homo sapiens 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],
Cell Pathway/ Category	PI3K/Akt
Protein Expression	Bladder,Brain,PNS,
Subcellular Localization	nucleus,nucleoplasm,cytoplasm,extracellular exosome,
Protein Function	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).,polymorphism:Variant Cys-379, under a dominant model, linked to a recessive mutation in LKB1, may be associated with susceptibility to type II or non-insulin-dependent diabetes mellitus (NIDDM).,PTM: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 by LKB1. Both insulin and AMPK increase this phosphorylation, of TORC2 while glucagon suppresses it.,similarity:Belongs to the TORC family.,subcellular location: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.,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 (By similarity). Interacts with PPP3CA/calcineurin alpha, SNF1LK2 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 TORC2.,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.,
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