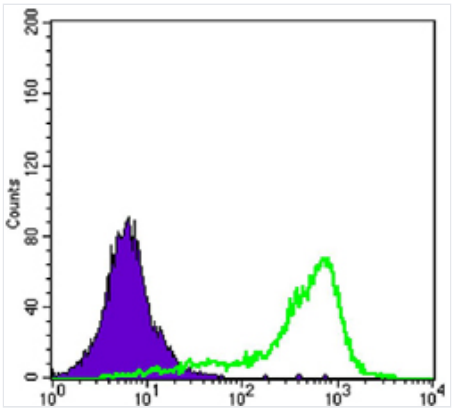
TORC1 Antibody – Mouse Monoclonal

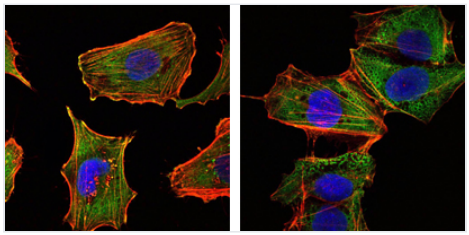
PRODUCT OVERVIEW

Product Name	TORC1, Monoclonal Antibody
Full Product Name	TORC1 Monoclonal Antibody
Product Gene Name	anti-TORC1 antibody
Product Synonym Names	CREB-regulated transcription coactivator 1; CRTC1; KIAA0616; MECT1; TORC1; WAMTP1; 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
Clonality	Monoclonal
Host	Mouse
Species Reactivity	Human
Form/Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Purity/Purification	Affinity purification
Specificity	TORC1 Monoclonal Antibody detects endogenous levels of TORC1 protein.
Preparation and Storage	Store at -20 degree C/1 year
Molecular Weight	62,530 Da
OMIM	607536
3D Structure	ModBase 3D Structure for Q6UUV9
Immunogen	Purified recombinant fragment of human TORC1 expressed in E coli.
Modification	Unmodified/Total
Disease	A chromosomal aberration involving CRTC1 is found in mucoepidermoid carcinomas, benign Warthin tumors and clear cell hidradenomas. Translocation t(11;19)(q21;p13) with MAML2. The fusion protein consists of the N-terminus of CRTC1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of CRTC1 has been detected in a small number of mucoepidermoid carcinomas.
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. Also coactivator for TAX activation of the human T-cell leukemia virus type 1 (HTLV-1) long terminal repeats (LTR). In the hippocampus, involved in late-phase long-term potentiation (L-LTP) maintenance at the Schaffer collateral-CA1 synapses.
PTM	Phosphorylation/dephosphorylation states of Ser-151 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 (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR. Belongs to the TORC family.
Subcellular Location	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.
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. Binds HTLV1 Tax.

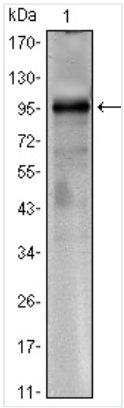
Tissue Specificity	Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart, spleen, lung, skeletal muscle, salivary gland, ovary and kidney.
Product Categories/Family for anti-TORC1 antibody	Primary Antibodies
Applications Tested/Suitable for anti-TORC1 antibody	Western Blot (WB), Immunofluorescence (IF), Immunocytochemistry (ICC), Flow Cytometry (FC/FACS/FCM), ELISA (EIA)
Application Notes for anti-TORC1 antibody	WB: 1:500-1:2000 IF: 1:200-1:1000 FC/FACS/FCM: 1:200-1:400 ELISA: 1:10000
Related Product Information for anti-TORC1 antibody	MBS9525121 is an antibody targeting TORC1. Also known as TORC1 Monoclonal Antibody. Reactive in Human. Host: Mouse.
Other Notes	Small volumes of anti-TORC1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-TORC1 antibody
Western Blot analysis using TORC1 Monoclonal Antibody against CRTC1-hIgGFc transfected HEK293 cell lysate.



Immunofluorescence (IF) of anti-TORC1 antibody
Immunofluorescence analysis of U251 (left) and NTERA2 (right) cells using TORC1 Monoclonal Antibody (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.



Flow Cytometry (FC/FACS) of anti-TORC1 antibody
Flow cytometric analysis of K562 cells using TORC1 Monoclonal Antibody (green) and negative control (purple).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TORC1. It may not necessarily be applicable to this product.

NCBI GI #	68565585
NCBI GeneID	23373
NCBI Accession #	Q6UUV9.2

UniProt Primary Accession #	Q6UUV9
UniProt Secondary Accession #	O75114; Q6Y3A3; Q7LDZ2; Q8IUL3; Q8IZ34; Q8IZL1; Q8N6W3; Q96AI8; Q9H801; A6NMG5
UniProt Related Accession #	Q6UUV9
NCBI Official Full Name	CREB-regulated transcription coactivator 1
NCBI Official Synonym Full Names	CREB regulated transcription coactivator 1
NCBI Official Symbol	CRTC1
NCBI Official Synonym Symbols	MECT1; TORC1; TORC-1; WAMTP1
UniProt Protein Name	CREB-regulated transcription coactivator 1
UniProt Synonym Protein Names	Mucoepidermoid carcinoma translocated protein 1; Transducer of regulated cAMP response element-binding protein 1; TORC-1; Transducer of CREB protein 1
Protein Family	Target of rapamycin complex
UniProt Gene Name	CRTC1
UniProt Synonym Gene Names	TORC-1; Transducer of CREB protein 1
UniProt Entry Name	CRTC1_HUMAN
NCBI Protein Information	CREB-regulated transcription coactivator 1; CRTC1 {ECO:0000312|HGNC:HGNC:16062}; mucoepidermoid carcinoma translocated protein 1; transducer of regulated cAMP response element-binding protein (CREB) 1
UniProt Comments for TORC1	TORC1: 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. Also coactivator for TAX activation of the human T-cell leukemia virus type 1 (HTLV-1) long terminal repeats (LTR). 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. 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. Binds HTLV1 Tax. 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. Belongs to the TORC family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Transcription factor Chromosomal Location of Human Ortholog: 19p13.11 Cellular Component: nucleoplasm; cytoplasm; plasma membrane; nucleus Molecular Function: protein binding; cAMP response element binding protein binding Biological Process: viral reproduction; transcription, DNA-dependent; membrane hyperpolarization; rhythmic process; activation of CREB transcription factor; positive regulation of transcription from RNA polymerase II promoter; memory; protein homotetramerization; entrainment of circadian clock by photoperiod
Research Articles on TORC1	**1.** Malignant mucoepidermoid salivary gland tumors can arise from a recurrent t (11, 19)(q21;p13.1) translocation that generates an unusual chimeric CRTC1/MAML2 oncoprotein.
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