

TORC1 Monoclonal Antibody

Catalog No :	YM0624
Reactivity :	Human
Applications :	WB;IF;FCM;ELISA
Target :	TORC1
Fields :	>>Human T-cell leukemia virus 1 infection
Gene Name :	CRTC1
Protein Name :	CREB-regulated transcription coactivator 1
Human Gene Id :	23373
Human Swiss Prot No :	Q6UUV9
Mouse Swiss Prot No :	Q68ED7
Immunogen :	Purified recombinant fragment of human TORC1 expressed in E. Coli.
Specificity :	TORC1 Monoclonal Antibody detects endogenous levels of TORC1 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
Purification :	Affinity purification
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Molecularweight :	67kD

P References :

1. Genes Chromosomes Cancer. 2007 Jun;46(6):559-63.
 2. Cancer Genet Cytogenet. 2008 Jan 15;180(2):135-9.
 3. Biosci Rep. 2009 Apr;29(2):77-87.
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Background :

disease:A chromosomal aberration involving CRTCC1 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 CRTCC1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of CRTCC1 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.,similarity: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.,

Function :

disease:A chromosomal aberration involving CRTCC1 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 CRTCC1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of CRTCC1 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

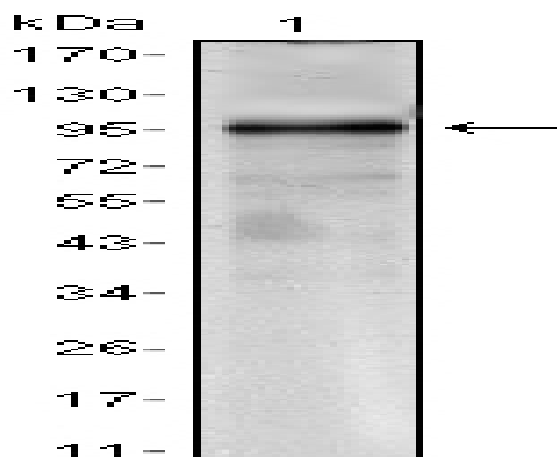
Subcellular Location :

Cytoplasm . Nucleus . 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). .

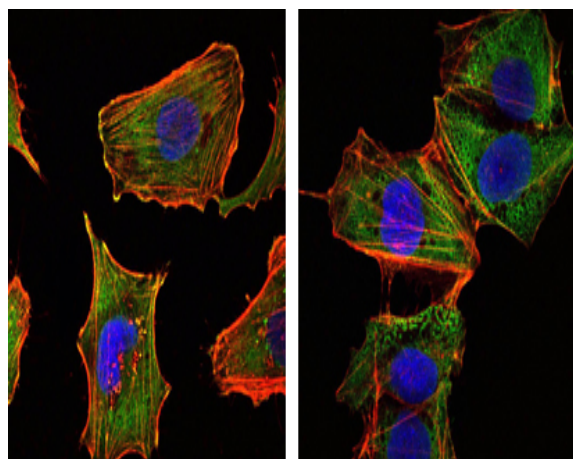
Expression :

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.

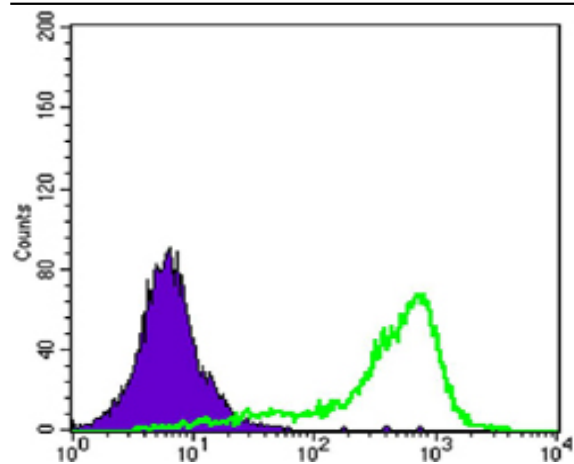
Products Images



Western Blot analysis using TORC1 Monoclonal Antibody against CRTC1-hlgGfc transfected HEK293 cell lysate.



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 cytometric analysis of K562 cells using TORC1 Monoclonal Antibody (green) and negative control (purple).