10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CRTC1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1428a

Product Information

Application	WB, FC, ICC, E
Primary Accession	Q6UUV9
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1B5
Isotype	IgG1
Calculated MW	67300
Description	MECT1 (also known as MucoEpidermoid Carcinoma Translocated 1) functions as a transcriptional coactivator for CREB1, which activates transcription through both consensus and variant cAMP response element (CRE) sites. MECT1 does not appear to modulate CREB1 DNA-binding activity but enhances the interaction of CREB1 with TAF4/TAFII-130. MECT1 translocates with MAML2 (MasterMind-Like Protein 2) to yield a fusion oncogene: t(11;19)(q21;p13). This translocation occurs in mucoepidermoid carcinomas, benign Warthin tumors and clear cell hidradenomas. The novel fusion product that results disrupts the Notch signaling pathway. The fusion protein consists of the N-terminus of MECT1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of MECT1 has been detected in a small number of mucoepidermoid carcinomas. Multiple isoforms have been reported for the MECT1 protein. 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.
Immunogen	Purified recombinant fragment of human CRTC1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	23373
Other Names	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, CRTC1 (HGNC:16062)
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~N/A

Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CRTC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

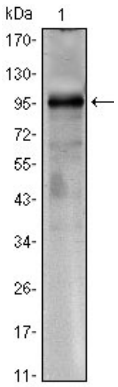
Name	CRTC1 (HGNC:16062)
Function	Transcriptional coactivator for CREB1 which activates transcription through both consensus and variant cAMP response element (CRE) sites. Acts as a coactivator, in the SIK/TORC signaling pathway, being active when dephosphorylated and acts independently of CREB1 'Ser-133' 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. 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 (By similarity). In concert with SIK1, regulates the light-induced entrainment of the circadian clock. In response to light stimulus, coactivates the CREB-mediated transcription of PER1 which plays an important role in the photic entrainment of the circadian clock.
Cellular Location	Cytoplasm. Nucleus. Note=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) {ECO:0000250|UniProtKB:Q68ED7, ECO:0000269|PubMed:15589160, ECO:0000269|PubMed:16817901}
Tissue Location	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.

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.

Images

Figure 1: Western blot analysis using CRTC1 mouse mAb against CRTC1(AA: 1-353)-hIgGFc transfected HEK293 cell lysate.



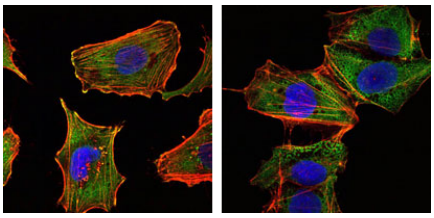


Figure 2: Immunofluorescence analysis of U251 (left) and NTERA2 (right) cells using CRTC1 mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

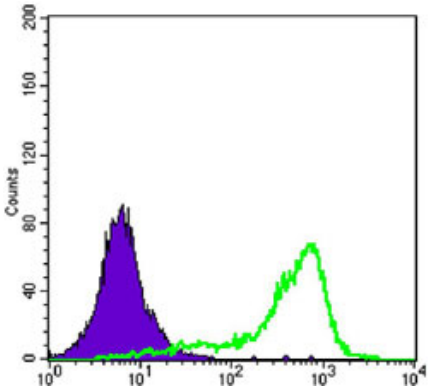


Figure 3: Flow cytometric analysis of K562 cells using CRTC1 mouse mAb (green) and negative control (purple).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.