Best Tools for immunology Research

# MECT1/Torc1 mouse mAb

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|---|---|
| **Catalog No :** | YM1289 |
| **Reactivity :** | Human |
| **Applications :** | WB;FC;ICC;IP |
| **Target :** | TORC1 |
| **Fields :** | >>Human T-cell leukemia virus 1 infection |
| **Gene Name :** | crtc1 |
| **Human Gene Id :** | 23373 |
| **Human Swiss Prot No :** | Q6UUV9 |
| **Mouse Swiss Prot No :** | Q68ED7 |
| **Immunogen :** | Purified recombinant human MECT1 / Torc1 protein fragments expressed in E.coli. |
| **Specificity :** | This antibody detects endogenous levels of MECT1 / Torc1 and does not cross-react with related proteins. |
| **Formulation :** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. |
| **Source :** | Monoclonal, Mouse |
| **Dilution :** | wb 1:1000 icc 1:300 fcm 1:100 |
| **Purification :** | The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen. |
| **Concentration :** | 1 mg/ml |
| **Storage Stability :** | -15°C to -25°C/1 year(Do not lower than -25°C) |
| **Observed Band :** | 78kD |

**Background :** 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.,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.,

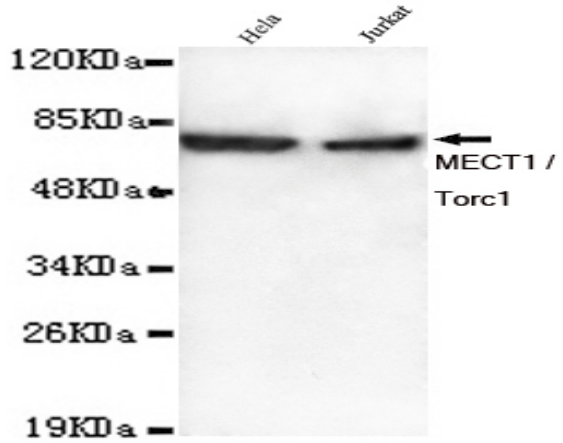
**Function :** disease:A chromosomal aberration involving CRTC1 is found in mucoepidermoid carcinomas, benign Warthin tumors and clear cell hidradenomas. Translocation t(11;19)(q21;p13) with MAML2. The fusion protein consists of the N-terminus of CRTC1 joined to the C-terminus of MAML2. The reciprocal 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

**Subcellular Location :** Cytoplasm . Nucleus . Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (PubMed:16817901). Translocated to the

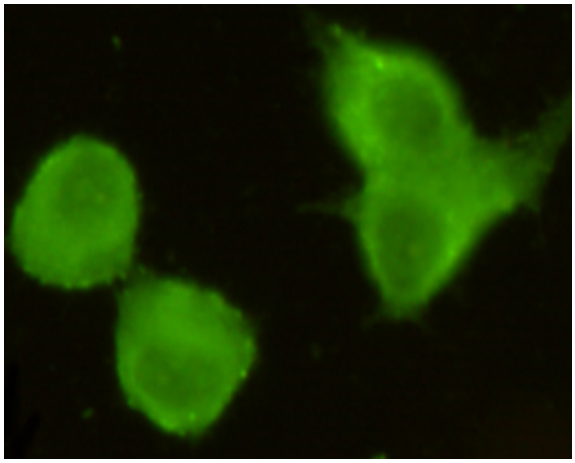
nucleus on Ser-151 dephosphorylation, instigated by a number of factors including calcium ion and cAMP levels (PubMed:15589160). Light stimulation triggers a nuclear accumulation in the suprachiasmatic nucleus (SCN) of the brain (By similarity). .

**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.

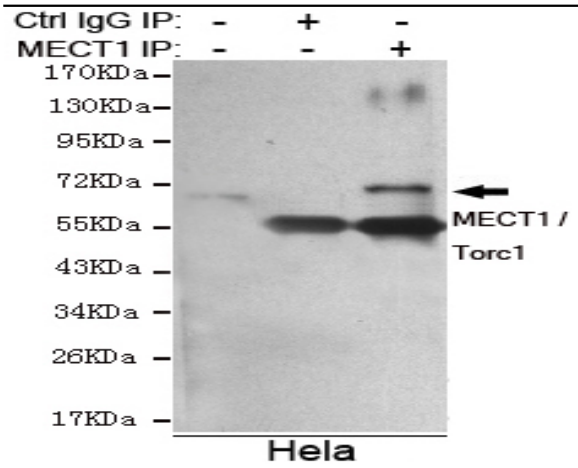
## Products Images



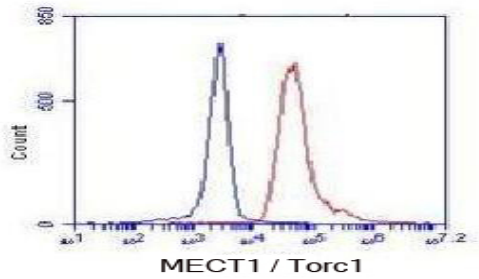

Western blot detection of MECT1 / Torc1 in Hela and Jurkat lysates using MECT1 / Torc1 mouse mAb (1:1000 diluted).Predicted band size: 78KDa.Observed band size: 78KDa.



Immunocytochemistry stain of Hela using MECT1 / Torc1 mouse mAb (1:300).




Immunoprecipitation analysis of Hela cell lysate using MECT1 / Torc1 mouse mAb.




Flow Cytometry analysis of K562 cells stained with TORC1(N-terminus) (red, 1/100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Blue line histogram represents the isotype control, normal mouse IgG.