

TORC1 monoclonal antibody

Catalog: MB66515

Host: Mouse

Reactivity: Human

BackGround:

Glucose homeostasis is regulated by hormones and cellular energy status. Elevations of blood glucose during feeding stimulate insulin release from pancreatic β -cells through a glucose sensing pathway. Feeding also stimulates release of gut hormones such as glucagon-like peptide-1 (GLP-1), which further induces insulin release, inhibits glucagon release and promotes β -cell viability. CREB-dependent transcription likely plays a role in both glucose sensing and GLP-1 signaling. The protein CRTC2 (CREB-regulated transcription coactivator 2)/TORC2 (transducer of regulated CREB activity 2) functions as a CREB co-activator and is implicated in mediating the effects of these two pathways. In quiescent cells, CRTC2/TORC2 is phosphorylated at Ser171 and becomes sequestered in the cytoplasm via an interaction with 14-3-3 proteins. Glucose and gut hormones lead to the dephosphorylation of CRTC2/TORC2 and its dissociation from 14-3-3 proteins. Dephosphorylated CRTC2/TORC2 enters the nucleus to promote CREB-dependent transcription. CRTC2/TORC2 plays a key role in the regulation of hepatic gluconeogenic gene transcription in response to hormonal and energy signals during fasting. CRTC2/TORC2-related proteins CRTC1/TORC1 and CRTC3/TORC3 also act as CREB co-activators. CRTC1/TORC1, CRTC2/TORC2 and CRTC3/TORC3 associate with the HTLV Tax protein to promote Tax-dependent transcription of HTLV-1 long terminal repeats. CRTC1/TORC1 is highly phosphorylated at Ser151 in mouse hypothalamic cells under basal conditions. When these cells are exposed to cAMP or a calcium activator, CRTC1/TORC1 is dephosphorylated and translocates into the nucleus. CRTC1/TORC1 is essential for energy balance and fertility.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 78 kDa

Swiss-Prot:

Q6UUU9

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/200), IP (1/20), FC (1/50 - 1/100)

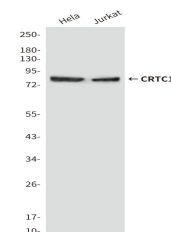
Storage&Stability:

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

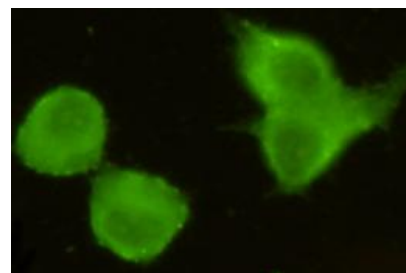
Specificity:

Recognizes endogenous levels of TORC1 protein.

DATA:



Western blot analysis of Tor1 in HeLa and Jurkat lysates using Tor1 antibody.



Immunocytochemistry analysis of Tor1 in HeLa using Tor1 antibody.

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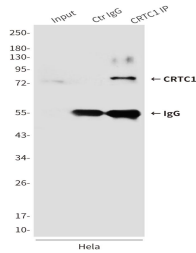
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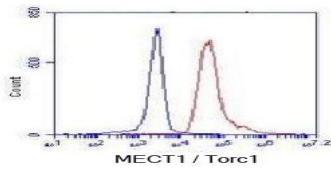
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**Note:**

For research use only, not for use in diagnostic procedure.

Immunoprecipitation analysis of Tor1 in HeLa cell lysates using Tor1 antibody.



Flow Cytometry analysis of Tor1 in K562 cells using Tor1 antibody (red). Blue line histogram represents the isotype control.

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