TORC2 Rabbit monoclonal antibody

Catalog: MB66461 Host: Rabbit 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 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 80 kDa

Swiss-Prot:

Q53ET0

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/100), IP (1/10 - 1/50)

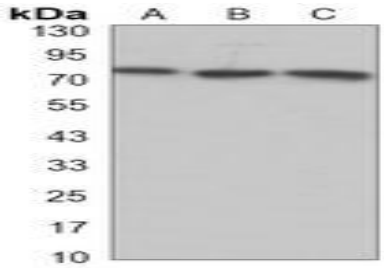
Storage&Stability:

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

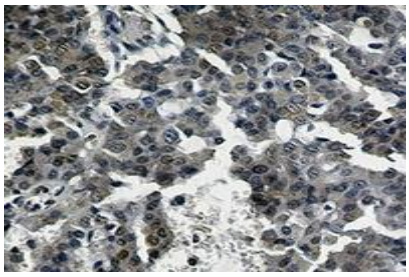
Specificity:

Recognizes endogenous levels of TORC2 protein.

DATA:



Western blot analysis of TORC2 expression in A549 (A), HL60 (B), U251 (C) whole cell lysates.



Immunohistochemical analysis of TORC2 staining in human breast carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.27). The section was then incubated with the antibody

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at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Note:

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

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