

[KD Validated] Anti-CRTC2 Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

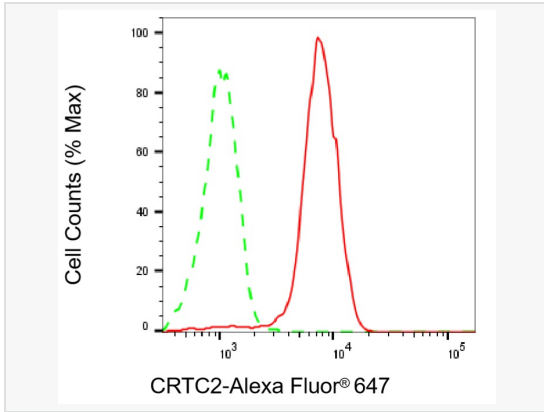
Catalog # R020457

Product Information

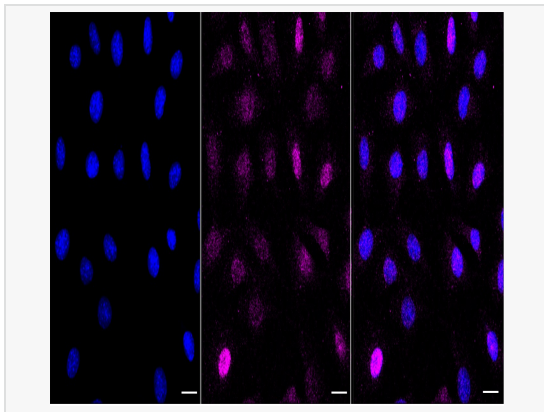
Application	WB, FC, IF (Cell)/ICC
Reactivity	Human, Mouse, Rat
Dilution	WB 1:1,000~1:5,000; FC 1:100~1:1,000; IF 1:100~1:1,000
Host	Rabbit
Clonality	Monoclonal
Clone No.	54E68E74
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human TORC2
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-CRTC2 Rabbit mAb [54E68E74] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

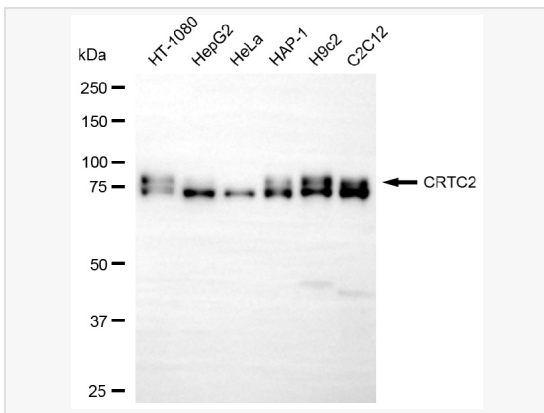
Synonyms	CRTC2; CREB Regulated Transcription Coactivator 2; TORC2; CREB-Regulated Transcription Coactivator 2; TORC-2; Transducer Of Regulated CAMP Response Element-Binding Protein (CREB) 2; Transducer Of Regulated CAMP Response Element-Binding Protein 2; Transducer Of CREB Protein 2.
Calculated MW	Calculated MW: 73 kDa; Observed MW: 75-80 kDa
Uniprot ID	Q53ET0
Gene ID	200186
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 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, 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 Torc2 and its dissociation from 14-3-3 proteins. Dephosphorylated Torc2 enters the nucleus to promote CREB-dependent transcription. Torc2 plays a key role in the regulation of hepatic gluconeogenic gene transcription in response to hormonal and energy signals during fasting. Tissue specificity: Most abundantly expressed in the thymus. Present in both B and T lymphocytes. Highly expressed in HEK293T cells and in insulinomas. High levels also in spleen, ovary, muscle and lung, with highest levels in muscle. Lower levels found in



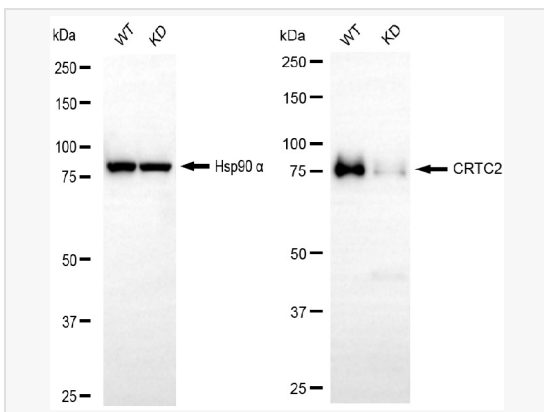
Flow cytometric analysis of CRTC2 expression in C2C12 cells using CRTC2 antibody (R020457, 1:2,000). Green, isotype control; red, CRTC2.



Immunocytochemical staining of C2C12 cells with CRTC2 antibody (R020457, 1:1,000). Nuclei were stained blue with DAPI; CRTC2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.



Western blotting analysis using CRTC2 antibody (R020457). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with CRTC2 antibody (R020457, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Western blotting analysis using CRTC2 antibody (R020457). CRTC2 expression in wild-type (WT) and CRTC2 knockdown (KD) 293T cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with CRTC2 antibody (R020457, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.