

ARG66329 anti-CREB antibody [SQab1877]

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab1877] recognizes CREB
Tested Reactivity	Hu, Ms, Rat, Bov
Tested Application	FACS, ICC/IF, IHC-P, IP, WB
Host	Rabbit
Clonality	Monoclonal
Clone	SQab1877
Isotype	IgG
Target Name	CREB
Species	Human
Immunogen	Synthetic peptide corresponding to aa. 200-300 of Human CREB.
Conjugation	Un-conjugated
Alternate Names	Cyclic AMP-responsive element-binding protein 1; CREB; CREB-1; cAMP-responsive element-binding protein 1

Application Instructions

Application table	Application	Dilution
	FACS	1:200 - 1:1000
	ICC/IF	1:10000 - 1:20000
	IHC-P	1:12000 - 24000
	IP	1:50
	WB	1:1000 - 1:2000
	Application Note	
		IHC-P: Antigen Retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

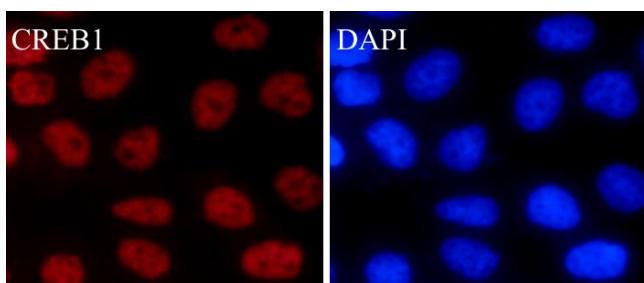
Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

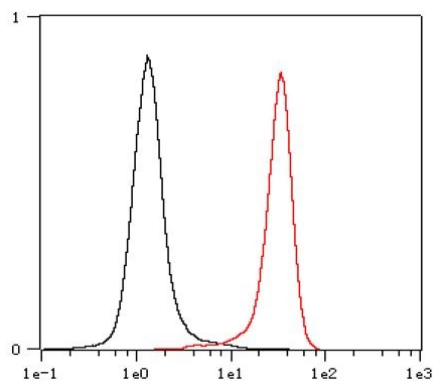
Gene Symbol	CREB1
Gene Full Name	cAMP responsive element binding protein 1
Background	CREB is a transcription factor. It is a member of the leucine zipper family of DNA binding proteins. This protein binds as a homodimer to the cAMP-responsive element, an octameric palindrome. The protein is phosphorylated by several protein kinases, and induces transcription of genes in response to hormonal stimulation of the cAMP pathway. Alternate splicing of this gene results in several transcript variants encoding different isoforms. [provided by RefSeq, Mar 2016]
Function	CREB is a phosphorylation-dependent transcription factor. It stimulates transcription upon binding to the DNA cAMP response element (CRE), a sequence present in many viral and cellular promoters. Transcription activation is enhanced by the TORC coactivators which act independently of Ser-133 phosphorylation. Involved in different cellular processes including the synchronization of circadian rhythmicity and the differentiation of adipose cells. [UniProt]
Calculated Mw	37 kDa
PTM	Stimulated by phosphorylation. Phosphorylation of both Ser-133 and Ser-142 in the SCN regulates the activity of CREB and participates in circadian rhythm generation. Phosphorylation of Ser-133 allows CREBBP binding. In liver, phosphorylation is induced by fasting or glucagon in a circadian fashion (By similarity). CREBL2 positively regulates phosphorylation at Ser-133 thereby stimulating CREB1 transcriptional activity (By similarity). Phosphorylated upon calcium influx by CaMK4 and CaMK2 on Ser-133. CaMK4 is much more potent than CaMK2 in activating CREB. Phosphorylated by CaMK2 on Ser-142. Phosphorylation of Ser-142 blocks CREB-mediated transcription even when Ser-133 is phosphorylated. Phosphorylated by CaMK1 (By similarity). Phosphorylation of Ser-271 by HIPK2 in response to genotoxic stress promotes CREB1 activity, facilitating the recruitment of the coactivator CBP. Phosphorylated at Ser-133 by RPS6KA3, RPS6KA4 and RPS6KA5 in response to mitogenic or stress stimuli. Sumoylated with SUMO1. Sumoylation on Lys-304, but not on Lys-285, is required for nuclear localization of this protein. Sumoylation is enhanced under hypoxia, promoting nuclear localization and stabilization. [UniProt]

Images



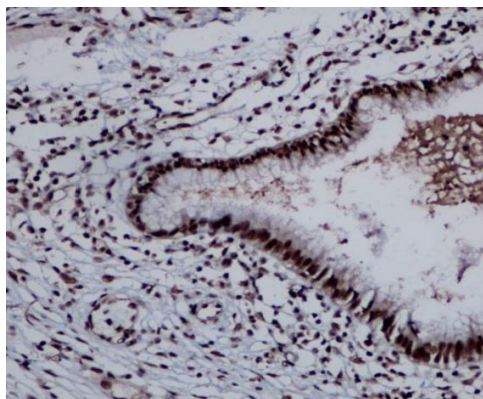
ARG66329 anti-CREB antibody [SQab1877] ICC/IF image

Immunofluorescence: HeLa cells were fixed with 4% paraformaldehyde for 30 min at RT, permeabilized with 0.1% Triton X-100 for 10 min at RT then blocked with 10% goat serum for 30 min at RT. Cells were stained with ARG66329 anti-CREB antibody [SQab1877] (red) at 1:20,000 and 4°C. DAPI (blue) was used as the nuclear counter stain.



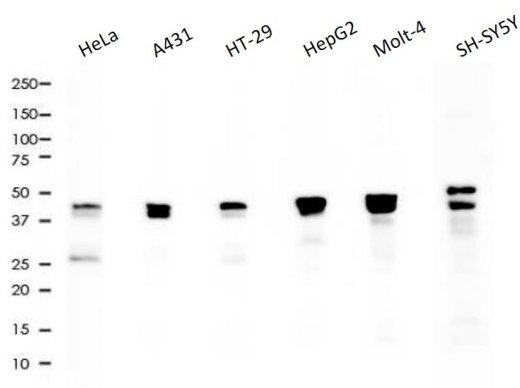
ARG66329 anti-CREB antibody [SQab1877] FACS image

Flow Cytometry: HeLa cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were stained with ARG66329 anti-CREB antibody [SQab1877] (red) at 1:1,000 dilution in 1x PBS/1% BSA for 30 min at RT, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (black) was used as a control. .



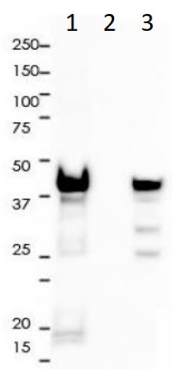
ARG66329 anti-CREB antibody [SQab1877] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded cervix uteri tissue stained with ARG66329 anti-CREB antibody [SQab1877] at 1:12,000 dilution. Antigen Retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0.



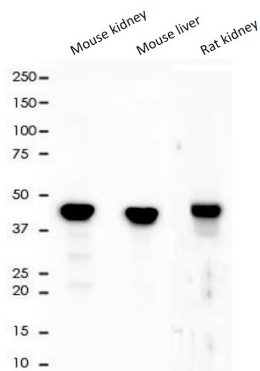
ARG66329 anti-CREB antibody [SQab1877] WB image

Western blot: 10 µg of HeLa, A431, HT-29, HepG2, Molt-4 and SH-SY5Y cell lysates stained with ARG66329 anti-CREB antibody [SQab1877] at 1:1000 dilution.



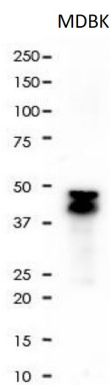
ARG66329 anti-CREB antibody [SQab1877] IP image

Immunoprecipitation: 0.4 mg of HeLa whole cell lysate immunoprecipitated (1:50) and stained with ARG66329 anti-CREB antibody [SQab1877]. 1) ARG66329 IP in HeLa whole cell lysate, 2) PBS instead of ARG66329 in HeLa whole cell lysate, and 3) HeLa whole cell lysate, 10 µg (input).



ARG66329 anti-CREB antibody [SQab1877] WB image

Western blot: 10 µg of Mouse kidney, Mouse liver and Rat kidney lysates stained with ARG66329 anti-CREB antibody [SQab1877] at 1:1000 dilution.



ARG66329 anti-CREB antibody [SQab1877] WB image

Western blot: 10 µg of MDBK lysate stained with ARG66329 anti-CREB antibody [SQab1877] at 1:5000 dilution.