

ARG54701
anti-CREB antibodyPackage: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CREB
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat, Bov
Tested Application	FACS, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Target Name	CREB
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 105-132 (Center) of Human CREB (NP_004370.1).
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	1:10 - 1:50
	ICC/IF	1:10 - 1:50
	WB	1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HT29	

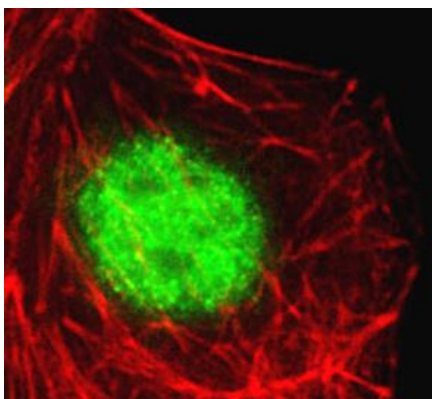
Properties

Purification	Protein A purified
Buffer	PBS and 0.09% (W/V) Sodium azide
Preservative	0.09% (W/V) Sodium azide
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 or below. 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

Database links	GeneID: 1385 Human Swiss-port # P16220 Human
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]
Research Area	Gene Regulation antibody; Immune System antibody; Signaling Transduction antibody
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.
Cellular Localization	Nucleus {ECO:0000255 PROSITE- ProRule:PRU00312, ECO:0000255 PROSITE-ProRule:PRU00978, ECO:0000269 PubMed:12552083}

Images



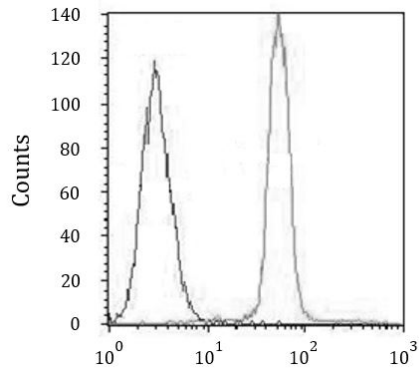
ARG54701 anti-CREB antibody ICC/IF image

Immunofluorescence: A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then stained with ARG54701 anti-CREB antibody (1:25, 1 h at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 h at 37°C).



ARG54701 anti-CREB antibody WB image

Western blot: 35 μ g of HT29 cell lysate stained with ARG54701 anti-CREB antibody.



ARG54701 anti-CREB antibody FACS image

Flow Cytometry: A549 cells stained with ARG54701 anti-CREB antibody (right histogram) or without primary antibody control (left histogram).