

Rabbit CREB Polyclonal Antibody | anti-CREB antibody

CREB Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322239	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CREB; Polyclonal Antibody; CREB Antibody; Active transcription factor CREB; cAMP response element binding protein 1; cAMP response element binding protein; cAMP responsive element binding protein 1; cAMP-responsive element-binding protein 1; CREB-1; CREB1; CREB1_HUMAN; Cyclic AMP-responsive element-binding protein 1; MGC9284; OTTHUMP00000163864; OTTHUMP00000163865; OTTHUMP00000206660; OTTHUMP00000206662; OTTHUMP00000206667; Transactivator protein; anti-CREB antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	CREB antibody detects endogenous levels of total CREB
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	327
Applicable Applications for anti-CREB antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CREB
Subcellular Location	CREB: Nucleus. CREM: Nucleus.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemisry)
AAA322239 at 1/100 staining Human breast cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)
AAA322239 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of CREB expression in UV treated HeLa whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-CREB antibody	Description: This gene encodes a transcription factor that 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. Function: Phosphorylation-dependent transcription factor that 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. Subunit Structure: Interacts with PPRC1. Binds DNA as a dimer. This dimer is stabilized by magnesium ions. Interacts, through the bZIP domain, with the coactivators TORC1/CRTC1, TORC2/CRTC2 and TORC3/CRTC3. When phosphorylated on Ser-133, binds CREBBP (By similarity). Interacts with CREBL2; regulates CREB1 phosphorylation, stability and transcriptional activity (By similarity). Interacts (phosphorylated form) with TOX3. Interacts with ARRB1. Binds to HIPK2. Interacts with SGK1. Post-translational Modifications: 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. Similarity: Belongs to the bZIP family.
References	Wang C, Zhou Y, Guan X, Yu M, Wang H; Journal: Toxicology. Beta-Estradiol antagonizes the inhibitory effects of caffeine in BMMSCs via the ERbeta-mediated cAMP-dependent PKA pathway.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4758054
NCBI GeneID	1385
NCBI Accession #	NP_004370.1
NCBI GenBank Nucleotide #	NM_004379.4
UniProt Accession #	P16220; P21934; Q6V963; Q9UMA7

Molecular Weight	Observed: 43 kDa Predicted: 37 kDa
NCBI Official Full Name	cyclic AMP-responsive element-binding protein 1 isoform A
NCBI Official Synonym Full Names	cAMP responsive element binding protein 1
NCBI Official Symbol	CREB1
NCBI Official Synonym Symbols	CREB; CREB-1
NCBI Protein Information	cyclic AMP-responsive element-binding protein 1
UniProt Protein Name	Cyclic AMP-responsive element-binding protein 1
UniProt Gene Name	CREB1
UniProt Synonym Gene Names	CREB-1; cAMP-responsive element-binding protein 1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/creb-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/322239>