

PE anti-CREB1 Phospho (Ser133) Antibody

Catalog# / Size	632555 / 25 tests 632556 / 100 tests
Clone	A22026B
Regulatory Status	RUO
Other Names	CAMP responsive element binding protein 1; CREB-1; Cyclic Adenosine 3',5'-Monophosphate Response Element-Binding Protein; CAMP-Responsive Element-Binding Protein 1
Isotype	Mouse IgG2b, κ
Description	Cyclic AMP (cAMP)-response element-binding protein 1 (CREB1) is a phosphorylation-dependent transcription factor that binds to the cAMP response element (CRE) in response to certain stimuli. CREB1 contains a basic leucine zipper (bZIP) DNA-binding domain, 1 dimerization domain, and 9 serine residues in 1 kinase inducible domain phosphorylated by multiple kinases, including Ca ²⁺ /CaM-dependent kinase (CaMK) II and IV, protein kinase A (PKA), protein kinase C (PKC), mitogen/stress-activated kinase (MSK), ribosomal S6 kinase (RSK), AKT, and MAPKAP kinase 2 (MK2). Both the protein levels and activation of CREB1 are vital for maintaining cellular homeostasis in physiological and pathological conditions. Phosphorylation of CREB1 at Ser133 promotes the recruitment of co-activator proteins CBP and p300, which has been proposed to increase transcription of CREB-dependent genes. Ser133 can also be phosphorylated by other proteins such as MSK1/2 in response to the activation of MAPK signaling.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Synthetic peptide for human CREB1 phosphorylated at serine 133
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	For use of this antibody in intracellular flow cytometry (ICFC), we recommend fixation and permeabilization with True-Phos™ Perm buffer (Cat. No. 425401).
RRID	AB_3662315 (BioLegend Cat. No. 632555) AB_3662315 (BioLegend Cat. No. 632556)

Antigen Details

Structure	CREB1 contains 327 amino acids at a predicted molecular weight around 37 kD.
Distribution	Ubiquitously expressed/Nucleus
Function	Under physiological conditions, CREB1 maintains cellular survival, proliferation, anti-inflammatory immune responses and modulates the development of the nervous system by serving a neuroprotective role. Under pathological conditions, increased levels of CREB1 is associated with acute lymphoblastic leukemia (ALL), acute myeloid leukemia (AML), Hodgkin's lymphoma, chronic lymphatic leukemia (CLL), melanoma, hepatocellular, renal cell, ovarian, prostate, lung, gastric, esophageal, pancreatic, and breast tumors. CREB1 is also involved in the aging process by regulating the downstream signals of mitochondria dysfunction.
Interaction	CREB1 interacts with CREBBP, CRT2, EP300, CRT1, JUN, AKT1, CAMK4, FOS, RPS6KA1, RPS6KA3, CaMKII, CaMKIV, PKA, PKC, MSK, RSK, AKT, and MK2.
Cell Type	B cells, Endothelial cells, Fibroblasts, Granulocytes, Macrophages, NK cells, T cells
Biology Area	Cell Biology, Transcription Factors
Antigen References	<ol style="list-style-type: none">1. Steven A, <i>et al.</i> 2020. <i>Cell Mol Life Sci.</i> 77:4049-4067.2. Lin PH, <i>et al.</i> 2020. <i>Diagnostics (Basel).</i> 10:295.3. Sakamoto K, <i>et al.</i> 2011. <i>J Neurochem.</i> 116:1-9.4. Wen AY, <i>et al.</i> 2010. <i>J Immunol.</i> 185:6413-9.5. Arnould T, <i>et al.</i> 2002. <i>EMBO J.</i> 21:53-63.6. Naqvi S, <i>et al.</i> 2014. <i>Biochem J.</i> 458:469-79.

Gene ID [1385](#)

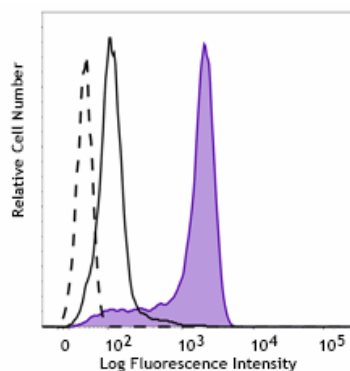
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-CREB1 Phospho (Ser133), Alexa Fluor® 647 anti-CREB1 Phospho (Ser133), PE anti-CREB1 Phospho (Ser133)

Product Data



Serum starved Jurkat cells untreated (low-expressing cell line, open histogram) or treated with Forskolin (positive cell line, filled histogram) were fixed and permeabilized using True-Phos™ Perm Buffer (Cat. No. 425401) and intracellularly stained with PE anti-CREB1 Phospho (Ser133) (clone A22026B), or PE mouse IgG2b, κ isotype control (open histogram, dashed line) (Cat No. 400312).

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