Datasheet for ABIN97863

anti-CREB1 antibody (pSer133)

3 Images | 1 Publication

Go to Product page

Overview

Quantity:	100 µL
Target:	CREB1
Binding Specificity:	AA 122-147, pSer133
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CREB1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP)

Product Details

Immunogen:	CREB phospho peptide corresponding to amino acid residues 122-147 of the human protein conjugated to Keyhole Limpet Hemocyanin (KLH).
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

Target Details

Target:	CREB1
Alternative Name:	CREB (CREB1 Products)
Background:	The CREB (Cyclic AMP-response-element-binding-protein 1) 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 (CRE element TGANNTCA), an octameric

Target Details

	palindrome. Phosphorylation by cAMP-dependent protein kinase (PKA) at serine-119 is required for interaction with DNA and phosphorylation at serine-133 allows CREB to interact with CBP (CREB binding protein) leading to interaction with RNA polymerase II. Alternate splicing of this gene results in two transcript variants encoding different isoforms. Synonyms: Active transcription factor CREB antibody, cAMP response element binding protein antibody, cAMP responsive element binding protein 1 antibody, CREB 1 antibody, CREB1 antibody, MGC9284 antibody, Transactivator protein antibody
Gene ID:	1385
UniProt:	P16220
Pathways:	TLR Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Thyroid Hormone Synthesis, Activation of Innate immune Response, Myometrial Relaxation and Contraction, Regulation of Cell Size, Toll-Like Receptors Cascades, G-protein mediated Events, Interaction of EGFR with phospholipase C-gamma, Positive Regulation of fat Cell Differentiation

Application Details

Application Notes:	This phospho specific polyclonal antibody reacts with phosphorylated human CREB at pS133 and shows minimal reactivity by western blot with non-phosphorylated CREB and minimal reactivity (1%) by ELISA against the non-phosphorylated form of the immunizing peptide. This antibody was assayed against a variety of tissues including fibroblasts and B-cell lysates. Bands of 46 and 43 kDa corresponding to phosphorylated CREB are observed in western blots. Anti-CREB pS133 is suitable for the detection by immunoblot of phosphoryl-ated human, mouse and rat CREB. No cross-reactivity occurs with non-phosphorylated CREB. For immunohistochemistry, formalin fixed, paraffin embedded human tissue shows moderate to strong nuclear staining in a variety of cells with minimal background staining. Although not tested this antibody is likely functional by FACS and immunoprecipitation.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.064 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

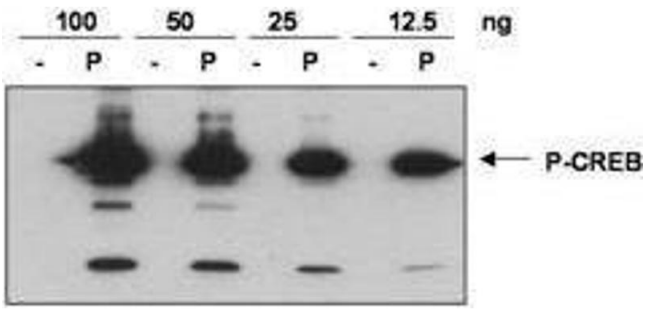
Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C

Publications

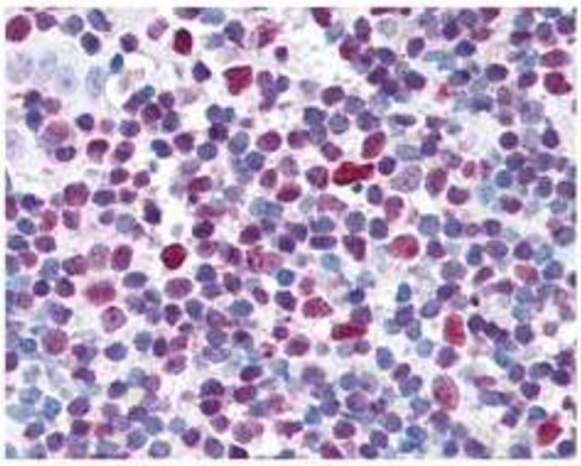
Product cited in:	Miller, Tejada, Gazzano-Santoro: "Development of an ELISA based bridging assay as a surrogate measure of ADCC." in: **Journal of immunological methods**, (2012) (PubMed).

Images



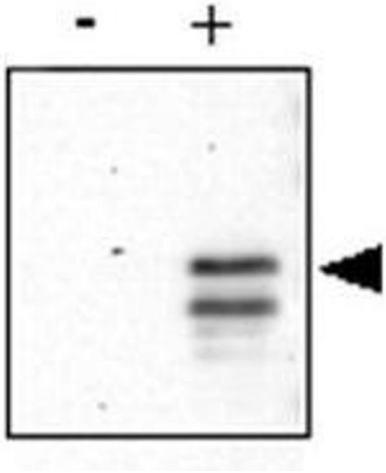
Western Blotting

Image 1. Anti-CREB pS133 was used to detect phosphorylated CREB by western blot. Recombinant His-tagged human CREB was produced in E.coli and purified by metal affinity chromatography. An aliquot of purified CREB was phosphorylated in-vitro using Protein Kinase A and ATP. western blot of indicated amounts of control and in-vitro phosphorylated CREB (P) were loaded to show that the antibody reacts specifically with the phosphorylated form. Blots were blocked in 5% milk in TBS+0.1% Tween-20 (TBST-M) overnight at 4°C. Detection occurs using a 1:500 dilution of antibody diluted in TBST-M and incubated at room temperature with rocking for 1 hour. Blots were rinsed 6X with TBST and incubated with goat anti-rabbit-HRP at 1:5000 in TBST-M at room temperature for 45 min. Blots were again rinsed 6X with TBST and then processed using ECL reagent (Amersham) according to manufacturer's instructions. Exposure time: 1 min using Kodak Biomax MR film. Personal Communication, R. Screaton, The Salk Institute for Biological Studies.



Immunofluorescence

Image 2. affinity purified anti-CREB pS133 antibody was used at 20 ?g/ml to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows moderate to strong nuclear staining of tonsillar lymphocytes. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.



Western Blotting

Image 3. Anti-CREB pS133 was used to detect phosphorylated CREB by western blot. Recombinant His-tagged human CREB was produced in E.coli and purified by metal affinity chromatography. An aliquot of purified CREB was phosphorylated in-vitro using Protein Kinase A and ATP. western blot of control and in-vitro phosphorylated CREB (+) was used to show that the antibody reacts specifically with the phosphorylated form. Pan reactive CREB (# 100-401-195) reacts equally with both non-phosphorylated and phosphorylated CREB (not shown). Detection occurs using a 1:500 dilution of antibody followed by 1:5,000 dilution of HRP Goat-a-Rabbit IgG with visualization via ECL. Film exposure was approximately 1'. Other detection systems will yield similar results. Personal Communication, Boss, J., Emory University School of Medicine, Atlanta, GA.

