# Phospho-CREB1 (S133) Antibody

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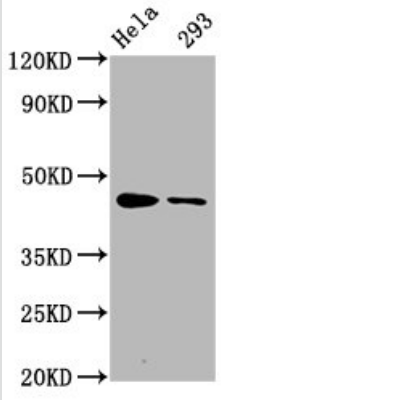
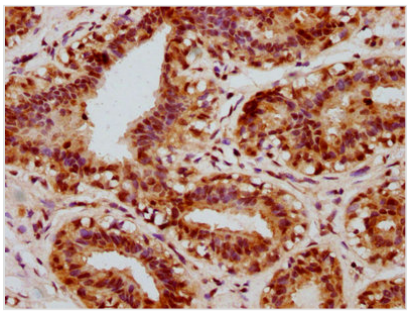
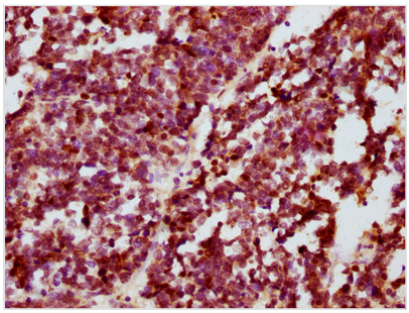
| **Product Code** | CSB-RA005947A133phHU |
| **Abbreviation** | Cyclic AMP-responsive element-binding protein 1 |
| **Storage** | Upon receipt, store at -20°C or -80°C. Avoid repeated freeze. |
| **Uniprot No.** | P16220 |
| **Immunogen** | A synthesized peptide derived from Human Phospho-CREB1 (S133) |
| **Species Reactivity** | Human |
| **Tested Applications** | ELISA, WB, IHC, IF; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200 |
| **Relevance** | 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. |
| **Form** | Liquid |
| **Conjugate** | Non-conjugated |
| **Storage Buffer** | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| **Purification Method** | Affinity-chromatography |
| **Isotype** | Rabbit IgG |
| **Clonality** | Monoclonal |
| **Alias** | Cyclic AMP-responsive element-binding protein 1, CREB-1, cAMP-responsive element-binding protein 1, CREB1 |
| **Immunogen Species** | Homo sapiens (Human) |
| **Research Area** | Epigenetics and Nuclear Signaling |
| **Gene Names** | CREB1 |
| **Accession NO.** | 3C11 |
| **Image** | |



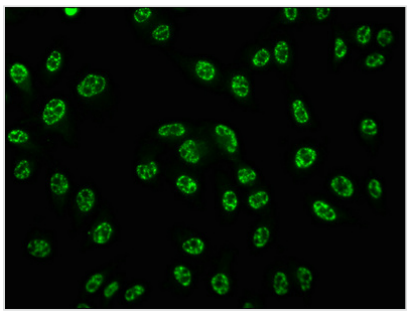

Western Blot
Positive WB detected in Hela whole cell lysate,293 whole cell lysate
All lanes Phospho-CREB1 antibody at 1.65µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 46 KDa
Observed band size: 46 KDa



IHC image of CSB-RA005947A133phHU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA005947A133phHU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of Hela cells with CSB-RA005947A133phHU at 1:100,counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).

## Description

The vectors expressing anti-CREB1 antibody were constructed as follows: immunizing an animal with a synthesized peptide derived from human Phospho-CREB1 (S133), isolating the positive splenocyte and extracting RNA, obtaining DNA by reverse transcription, sequencing and screening CREB1 antibody gene, and amplifying heavy and light chain sequence by PCR and cloning them into plasma vectors. After that, the vector clones were transfected into the mammalian cells for production. The product is the recombinant CREB1

antibody. Recombinant CREB1 antibody in the culture medium was purified using affinity-chromatography. It can react with CREB1 protein from Human and is used in the ELISA, WB, IHC, IF.

In adult mammalian retina, p-CREB1 is normally limited to the ganglion cell and inner nuclear layers. It appears that as in other parts of the nervous system, stressful stimuli can induce phosphorylation of CREB1 in retinal neurons. CREB1 not only controls the expression of its own direct target genes, but is also involved in signaling crosstalk with nuclear receptors such as the glucocorticoid receptor and ERα. Whether CREB1 stimulates or represses nuclear receptor activity seems to be cell-context dependent. Upon phosphorylation of serine 133 by PKA, pCREB1 can specifically recruit the coactivator CREB binding protein (CBP) and its paralog p300. The stimulatory activity of CREB1 requires its DNA binding and activation by phosphorylation, and affects the chromatin recruitment of ERα. CREB1 and ERα are biochemically associated and share hundreds to thousands of chromatin binding sites upon stimulation by estrogen and cAMP, respectively.