

# Anti-CREB (Ser-133), Phosphospecific Antibody

Catalog # AN1724

### **Specification**

## Anti-CREB (Ser-133), Phosphospecific Antibody - Product Information

Application WB
Primary Accession P16220

Reactivity Bovine, Chicken

Host Mouse

Clonality Mouse Monoclonal

Isotype IgG1
Calculated MW 35136

### Anti-CREB (Ser-133), Phosphospecific Antibody - Additional Information

Gene ID 1385 Other Names

Cyclic AMP, CREB

#### Target/Specificity

CREB (cyclic AMP response element-binding protein) is a stimulus-induced transcription factor that plays pivotal roles in cell survival and proliferation. CREB is expressed in various tissues, and has important gene-regulating roles in the nervous system. The transactivation function of CREB is primarily regulated through Ser-133 phosphorylation by cAMP-dependent protein kinase A (PKA) and related kinases. CREB is phosphorylated at other sites in response to calcium influx and DNA damage. The DNA-damage responsive nuclear kinase, HIPK2, can phosphorylate Ser-271 but not Ser-133 in CREB, and this phosphorylation activates CREB transactivation function. Mutation of Ser-271 to Glu-271 potentiates the CREB transactivation function. Thus, phosphorylation of Ser-271 may be the mode of activation for CREB-dependent transcription in response to genotoxic stress.

#### **Dilution**

WB~~1:1000

#### **Format**

Protein A Purified

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

### **Precautions**

Anti-CREB (Ser-133), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### **Shipping**

Blue Ice

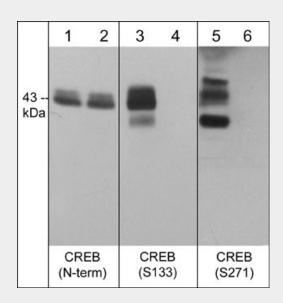


### Anti-CREB (Ser-133), Phosphospecific Antibody - Protocols

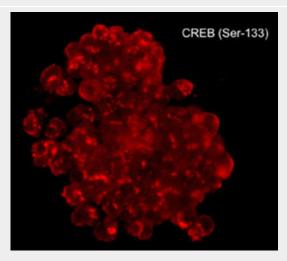
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# Anti-CREB (Ser-133), Phosphospecific Antibody - Images



Western blot analysis of human A431 cells treated with calyculin A (100 nM) for 30 min. (lanes 1, 3 & 5) then the blots were treated with lambda phosphatase (lanes 2, 4 & 6). The blots were probed with anti-CREB (N-terminal region) (lanes 1 & 2), anti-CREB (Ser-133) (lanes 3 & 4), and anti-CREB (Ser-271) (lanes 5 & 6).



Immunocytochemical labeling of phosphorylated CREB in calyculin A-treated A431 cells. The cells were fixed in paraformaldehyde and permeabilized using NP-40 before labeling with mouse monoclonal CREB (Ser-133). The antibody was detected using goat anti-mouse DyLight® 594.





### Anti-CREB (Ser-133), Phosphospecific Antibody - Background

CREB (cyclic AMP response element-binding protein) is a stimulus-induced transcription factor that plays pivotal roles in cell survival and proliferation. CREB is expressed in various tissues, and has important gene-regulating roles in the nervous system. The transactivation function of CREB is primarily regulated through Ser-133 phosphorylation by cAMP-dependent protein kinase A (PKA) and related kinases. CREB is phosphorylated at other sites in response to calcium influx and DNA damage. The DNA-damage responsive nuclear kinase, HIPK2, can phosphorylate Ser-271 but not Ser-133 in CREB, and this phosphorylation activates CREB transactivation function. Mutation of Ser-271 to Glu-271 potentiates the CREB transactivation function. Thus, phosphorylation of Ser-271 may be the mode of activation for CREB-dependent transcription in response to genotoxic stress.