

## DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human CREB when phosphorylated at S133.   |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 702710   |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | Phosphopeptide containing the human CREB S133 site  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

|                            | Recommended Concentration | Sample    |
|----------------------------|---------------------------|-----------|
| <b>Western Blot</b>        | 0.5 µg/mL                 | See Below |
| <b>Immunocytochemistry</b> | 8-25 µg/mL                | See Below |

## DATA

**Western Blot**

**Detection of Human Phospho-CREB (S133) by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and HEK293 human embryonic kidney cell line untreated (-) or treated (+) with 20 mJ/cm<sup>2</sup> ultraviolet light (UV) with a 30 minute recovery. PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human Phospho-CREB (S133) Monoclonal Antibody (Catalog # MAB6906) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Phospho-CREB (S133) at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**

**Phospho-CREB (S133) in HeLa Human Cell Line.** CREB phosphorylated at A133 was detected in immersion fixed HeLa human cervical epithelial carcinoma cells, unstimulated (lower panel) and stimulated (upper panel) with PMA, using Mouse Anti-Human Phospho-CREB (S133) Monoclonal Antibody (Catalog # MAB6906) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Sterile PBS to a final concentration of 0.5 mg/mL.   |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

The cAMP response element binding protein (CREB) belongs to the bZIP superfamily of transcription factors, containing a basic domain that mediates DNA binding and a leucine zipper domain that facilitates dimerization. Within the promoter of target genes, CREB dimers bind cAMP response elements, defined by the palindromic consensus sequence TGACGTC. When phosphorylated at Ser133, CREB also binds the coactivator CREB binding protein (CBP), which enhances transcription by acetylating histones to facilitate chromatin unraveling.