

### CREB peptide ab204856

#### Description

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| <b>Product name</b> | CREB peptide  |
| <b>Purity</b>       | > 96 % HPLC.  |
| <b>Animal free</b>  | No            |
| <b>Nature</b>       | Synthetic     |
| <b>Sequence</b>     | KRREILSRRPSYR |
| <b>Amino acids</b>  | 109 to 121    |

#### Specifications

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Our **Abpromise guarantee** covers the use of **ab204856** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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| <b>Applications</b>     | HPLC<br>Functional Studies   |
| <b>Form</b>             | Lyophilized  |
| <b>Additional notes</b> | ab204856 (CREB peptide) can be utilized as a substrate for the following active protein kinases: |

- ab190396** (Active human KSR1 protein fragment)
- ab185259** (Active human KSR2 protein fragment)
- ab56268** (Active human cAMP Protein Kinase Catalytic subunit full length protein)
- ab60837** (Active human PKA beta (catalytic subunit) full length protein)
- ab60838** (Active human PKA gamma (catalytic subunit) full length protein)
- ab60839** (Active X. laevis PKC alpha full length protein)
- ab55672** (Active human PKC alpha full length protein)
- ab60841** (Active human PKC beta 2 full length protein)
- ab60844** (Active human PKC delta full length protein)
- ab60850** (Active human PKC iota full length protein)
- ab89860** (Active human PKN2 full length protein)
- ab60873** (Active human PKC mu full length protein)
- ab60874** (Active human PKC nu full length protein)
- ab60848** (Active human PKC zeta full length protein)
- ab60875** (Active human Protein Kinase D2 full length protein)
- ab139624** (Active human STK19 full length protein)

## Preparation and Storage

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| <b>Stability and Storage</b> | Shipped at 4°C. Store at -20°C. Avoid freeze / thaw cycle.   |
| <b>Reconstitution</b>        | Dilute peptide in 20mM Tris-HCl, pH 7.5 solution to a final concentration of 1 mg/ml. For optimal storage, aliquot diluted product into smaller quantities and store at recommended temperature. |

## General Info

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| <b>Function</b>                         | This protein binds the cAMP response element (CRE), a sequence present in many viral and cellular promoters. CREB stimulates transcription on binding to the CRE. Transcription activation is enhanced by the TORC coactivators which act independently of Ser-133 phosphorylation. Implicated in synchronization of circadian rhythmicity.  |
| <b>Involvement in disease</b>           | Defects in CREB1 may be a cause of angiomatoid fibrous histiocytoma (AFH) [MIM:612160]. A distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. Characteristic microscopic features include lobulated sheets of histiocyte-like cells intimately associated with areas of hemorrhage and cystic pseudovascular spaces, as well as a striking cuffing of inflammatory cells, mimicking a lymph node metastasis. Note=A chromosomal aberration involving CREB1 is found in a patient with angiomatoid fibrous histiocytoma. Translocation t(2;22)(q33;q12) with CREB1 generates a EWSR1/CREB1 fusion gene that is most common genetic abnormality in this tumor type. |
| <b>Sequence similarities</b>            | Belongs to the bZIP family.<br>Contains 1 bZIP domain.<br>Contains 1 KID (kinase-inducible) domain.  |
| <b>Post-translational modifications</b> | Stimulated by phosphorylation. Phosphorylation of both Ser-133 and Ser-142 in the SCN regulates the activity of CREB and participates in circadian rhythm generation. Phosphorylation of Ser-133 allows CREBBP binding (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR.<br>Sumoylated by SUMO1. Sumoylation on Lys-304, but not on Lys-285, is required for nuclear localization of this protein. Sumoylation is enhanced under hypoxia, promoting nuclear localization and stabilization.   |
| <b>Cellular localization</b>            | Nucleus.   |

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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