

## Product datasheet

# CREB peptide ab204856

### Description

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<b>Product name</b>	CREB peptide
<b>Animal free</b>	No
<b>Nature</b>	Synthetic
<b>Sequence</b>	KRREILSRRPSYR
<b>Amino acids</b>	123 to 135

### 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.

<b>Applications</b>	HPLC 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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### Stability and Storage

Shipped at 4°C. Store at -20°C. Avoid freeze / thaw cycle.

### Reconstitution

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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### Function

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.

### Involvement in disease

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.

### Sequence similarities

Belongs to the bZIP family.  
Contains 1 bZIP domain.  
Contains 1 KID (kinase-inducible) domain.

### Post-translational modifications

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.  
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.

### Cellular localization

Nucleus.

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

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