

Recombinant Human CREB1

Cat. No. CREB1-26H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human CREB produced in *E. Coli* is a non-glycosylated, polypeptide chain containing amino acids 2-328 having a molecular mass of 81 KD. This protein is the full-length form and is produced as a maltose binding protein (MBP) fusion protein with a poly His-tag. CREB is purified by proprietary chromatographic techniques.

Species Human

Source E.coli

ProteinLength 2-328 a.a.

Description CREB (cAMP response element-binding) proteins are transcription factors which bind to certain sequences called cAMP response elements (CRE) in DNA and thereby increase or decrease the transcription of certain genes. CREB is highly related (in structure and function) to CREM (cAMP response element modulator) and ATF-1 (activating transcription factor-1) proteins. CREB has many functions in many different organs although most of its functions have been studied in relation to the brain. CREB is also thought to be involved in the growth of some types of cancer. In humans.

Physical Appearance Lyophilized freeze dry powder.

Purity Greater than 95% as determined by SDS-PAGE.

Formulation CREB is supplied as lyophilized freeze dry powder without additives.

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Biological Activity

CREB is phosphorylatable in vitro, using either recombinant Protein Kinase A, or Rsk immunoprecipitated from stimulated cells. This phosphorylation can be monitored by ELISA using CREB [pS133] phosphoELISA or by Western blotting using an anti-CREB [pS133] phosphorylation site specific antibody in conjunction with chemiluminescence detection methods. Optimization of the cell stimulation protocol, cell lysis procedure, and reaction conditions may be required for each specific application. Please note: Kinase activity may vary depending on the substrate and reaction conditions.

Storage

Store at 4°C if entire vial will be used within 1-2 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.

GENE INFORMATION

Gene Name

CREB1 cAMP responsive element binding protein 1 [Homo sapiens]

Synonyms

CREB1; cAMP responsive element binding protein 1; CREB; MGC9284; OTTHUMP00000206660; transactivator protein; active transcription factor CREB; cAMP-response element-binding protein-1; CREB-1

Gene ID

1385

mRNA Refseq

NM_004379

Protein Refseq

NP_004370

MIM

123810

UniProt ID

P16220

Chromosome

2q34

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Location**Pathway**

Antigen processing and presentation; Huntington's disease; Melanogenesis; Prostate cancer

Function

RNA polymerase II transcription factor activity, enhancer binding; double-stranded DNA binding; protein dimerization activity; sequence-specific DNA binding; specific RNA polymerase II transcription factor activity; transcription cofactor activity

PDB rendering based on 1dh3.



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