

# CREB-1 (254-327): sc-4002

## BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors that bind modular *cis*-acting promoter and enhancer elements. The ATF/CREB transcription factor family binds the palindromic cAMP response element (CRE) octanucleotide TGACGTC A. The ATF/CREB family includes CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. This family of proteins contains highly divergent N-terminal domains, but shares a C-terminal leucine zipper for dimerization and DNA binding. Although CREB can bind to DNA in an unphosphorylated state, it cannot activate transcription. Phosphorylation of CREB on Ser 133 by protein kinase A facilitates its interaction with the CREB-binding protein (CBP) and activates the basal transcription complex. CREB functions in neoglucogenesis through interactions with the nuclear coactivator PGC-1. CREB may play a role in the pathogenesis of type II diabetes and dilated cardiomyopathy.

## REFERENCES

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## SOURCE

CREB-1 (254-327) is expressed in *E. coli* as a 10-14 kDa polypeptide corresponding to amino acids 254-327 mapping within the DNA binding and dimerization domains of CREB-1 of human origin.

## PRODUCT

CREB-1 (254-327) is purified from bacterial lysates; supplied as 50 µg purified protein in PBS containing 5 mM DTT and 50% glycerol.

Also available as a Western blotting control; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer, CREB-1 (254-327): sc-4002 WB.

## APPLICATIONS

CREB-1 (254-327) binds DNA constitutively and is recommended as a control for gel shift studies using sc-2504 and sc-2517 oligonucleotide probes with TransCruz gel supershift antibodies sc-186 X, sc-240 X and sc-271 X.

CREB-1 (254-327): sc-4002 WB is suitable as a Western blotting control for sc-186, sc-240 and sc-271.

## SELECT PRODUCT CITATIONS

1. Suire, S., Fontaine, I. and Guillou, F. 1995. Follicle stimulating hormone (FSH) stimulates transferrin gene transcription in rat Sertoli cells: *cis* and *trans*-acting elements involved in FSH action via cyclic adenosine 3',5'-monophosphate on the transferrin gene. *Mol. Endocrinol.* 9: 756-766.
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## STORAGE

Store CREB-1 (254-327): sc-4002 and sc-4002 WB at -20° C; stable for one year from the date of shipment.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.