CREB-1 (D-12): sc-377154

**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 TGACGTCA. 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.

**SOURCE**

CREB-1 (D-12) is a mouse monoclonal antibody raised against amino acids 254-327 of CREB-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377154 X, 200 µg/0.1 ml.

CREB-1 (D-12) is available conjugated to agarose (sc-377154 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377154 HRP), 200 µg/ml, for WB, IHCP and ELISA; to either phycoerythrin (sc-377154 PE), fluorescein (sc-377154 FITC), Alexa Fluor® 488 (sc-377154 AF488), Alexa Fluor® 546 (sc-377154 AF546), Alexa Fluor® 594 (sc-377154 AF594) or Alexa Fluor® 647 (sc-377154 AF647), 200 µg/ml, for WB (RGB), IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-377154 AF680) or Alexa Fluor® 790 (sc-377154 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

CREB-1 (D-12) is recommended for detection of CREB-1A, CREB-1B, CREM and ATF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). CREB-1 (D-12) is also recommended for detection of CREB-1A, CREB-1B, CREM and ATF-1 in additional species, including equine, canine, bovine, porcine and avian.

CREB-1 (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CREB-1: 43 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, A-431 whole cell lysate: sc-2201 or CREB-1 (m): 293T Lysate: sc-119446.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

CREB-1 (D-12): sc-377154. Western blot analysis of CREB-1 expression in non-transfected: sc-117752 (A) and mouse CREB-1 transfected: sc-119446 (B) 293T whole cell lysates.

CREB-1 (D-12): sc-377154. Immunofluorescence staining of melanin-fixed HEK cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**PROTOCOLS**

See our website at **www.scbt.com** for detailed protocols and support products.

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**Contact:**
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