SANTA CRUZ BIOTECHNOLOGY, INC.

CRX (A-9): sc-377138

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The cone-rod homeobox-containing gene (CRX) encodes a transcription factor that coordinates the expression of several photoreceptor genes in the developing retina, including opsin and rhodopsin. Specifically, CRX binds the OTX motif (TAATCC/A) upstream from photoreceptor genes. The CRX gene is also expressed in the pinealocytes of the pineal gland and may regulate pineal circadian activity by controling the expression of melatonin synthesis genes. Furthermore, CRX^{-} mice exhibit disruption of circadian rhythms. The human CRX gene maps to chromosome 19q13.33 within the region of the cone-rod dystrophy-2 locus (CORD2). Mutations in the CRX gene are implicated in the visual pathologies of CORD, Leber congenital amaurosis (LCA) and retinitis pigmentosa (RP). All characterized CRX gene mutations produce disease in heterozygotes although there is no known correlation between the pathologic phenotype and genetic mutation. Missense mutations of the CRX gene affect the homeobox domain, whereas frameshift mutations affect the OTX domain.

CHROMOSOMAL LOCATION

Genetic locus: CRX (human) mapping to 19q13.33; Crx (mouse) mapping to 7 A2.

SOURCE

CRX (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-143 within an internal region of CRX of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-377138 X, 200 µg/0.1 ml.

CRX (A-9) is available conjugated to agarose (sc-377138 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377138 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377138 PE), fluorescein (sc-377138 FITC), Alexa Fluor® 488 (sc-377138 AF488), Alexa Fluor® 546 (sc-377138 AF546), Alexa Fluor® 594 (sc-377138 AF594) or Alexa Fluor® 647 (sc-377138 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377138 AF680) or Alexa Fluor® 790 (sc-377138 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377138 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

CRX (A-9) is recommended for detection of CRX 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

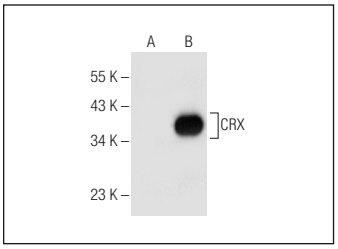
Suitable for use as control antibody for CRX siRNA (h): sc-38649, CRX siRNA (m): sc-38650, CRX shRNA Plasmid (h): sc-38649-SH, CRX shRNA Plasmid (m): sc-38650-SH, CRX shRNA (h) Lentiviral Particles: sc-38649-V and CRX shRNA (m) Lentiviral Particles: sc-38650-V.

CRX (A-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

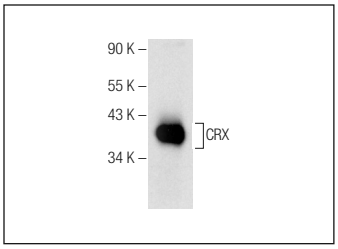
Molecular Weight of CRX: 32 kDa.

Positive Controls: Y79 cell lysate: sc-2240, IMR-32 nuclear extract: sc-2148 or CRX (m): 293T Lysate: sc-126669.

DATA



CRX (A-9): sc-377138. Western blot analysis of CRX expression in non-transfected: sc-117752 (**A**) and mouse CRX transfected: sc-126669 (**B**) 293T whole cell lysates.



CRX (A-9): sc-377138. Western blot analysis of CRX expression in Y79 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liu, Y., et al. 2017. Regulated differentiation of WERI-Rb-1 cells into retinal neuron-like cells. Int. J. Mol. Med. 40: 1172-1184.
2. Salehi, H., et al. 2019. Application of hanging drop culture for retinal precursor-like cells differentiation of human adipose-derived stem cells using small molecules. J. Mol. Neurosci. 69: 597-607.
3. Jiang, Y., et al. 2021. Poly ADP ribose polymerase inhibitor olaparib targeting microhomology end joining in retinoblastoma protein defective cancer: analysis of the retinoblastoma cell-killing effects by Olaparib after inducing double-strand breaks. Int. J. Mol. Sci. 22: 10687.
4. Dezfuly, A.R., et al. 2022. Therapeutic effects of human adipose mesenchymal stem cells and their paracrine agents on sodium iodate induced retinal degeneration in rats. Life Sci. 300: 120570.

RESEARCH USE

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