SANTA CRUZ BIOTECHNOLOGY, INC.

# CrkRS (R-12): sc-81834

## BACKGROUND

CrkRS (Cdc2-related kinase, arginine/serine-rich, also designated CRK7 and CRKR) is a ubiquitous protein that appears to localize to the nucleus and link transcription and splicing machinery. CrkRS belongs to the serine/threonine protein kinase family and Cdc2/Cdkx subfamily. CrkRS has extensive proline-rich regions that resemble SH3 and WW domain binding sites, and an RS domain that is characteristic of splicing factors. The protein kinase domain of CrkRS is 89% identical to the CHED protein kinase, also designated CDC2L5 and cell division cycle 2-like 5 (cholinesterase-related cell division controller), however outside the kinase domains the two proteins are unique. Cell cycle control kinases can phosphorylate proteins important for differentiation and apoptosis and provide connections between proliferation, differentiation, apoptosis, and neurocytoskeleton dynamics.

## REFERENCES


1. Lapidot-Lifson, Y., et al. 1992. Cloning and antisense oligodeoxynucleotide inhibition of a human homolog of Cdc2 required in hematopoiesis. Proc. Natl. Acad. Sci. USA 89: 579-583.
2. Meyerson, M., et al. 1992. A family of human Cdc2-related protein kinases. EMBO J. 11: 2909-2917.
3. Ershler, M., et al. 1993. Novel Cdc2-related protein kinases produced in murine hematopoietic stem cells. Gene 124: 305-306.
4. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 355-364.
5. Marques, F., et al. 2000. A new subfamily of high molecular mass Cdc2-related kinases with PITAI/VRE motifs. Biochem. Biophys. Res. Commun. 279: 832-837.
6. Ko, T.K., et al. 2001. CrkRS: a novel conserved Cdc2-related protein kinase that co-localises with SC35 speckles. J. Cell Sci. 114: 2591-2603.
7. Yee, K.W., et al. 2003. NKIAMRE, a novel conserved Cdc2-related kinase with features of both mitogen-activated protein kinases and cyclin-dependent kinases. Biochem. Biophys. Res. Commun. 308: 784-792.


## CHROMOSOMAL LOCATION

Genetic locus: CRKRS (human) mapping to 17q12.

## SOURCE

CrkRS (R-12) is a mouse monoclonal antibody raised against recombinant CrkRS of human origin.

## PRODUCT

Each vial contains 50 µg $IgG_1$ in 500 µl of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

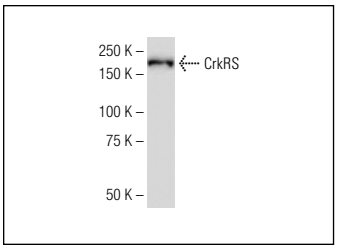
CrkRS (R-12) is recommended for detection of CrkRS of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CrkRS siRNA (h): sc-44343, CrkRS shRNA Plasmid (h): sc-44343-SH and CrkRS shRNA (h) Lentiviral Particles: sc-44343-V.

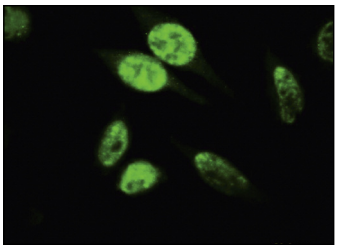
Molecular Weight of CrkRS: 180 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

## DATA




CrkRS (R-12): sc-81834. Western blot analysis of CrkRS expression in HeLa nuclear extract.



CrkRS (R-12): sc-81834. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS


1. Albert, T.K., et al. 2016. The establishment of a hyperactive structure allows the tumour suppressor protein p53 to function through P-TEFb during limited CDK9 kinase inhibition. PLoS ONE 11: e0146648.


## RESEARCH USE

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

## PROTOCOLS

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