

CCRK (L-35): sc-81838

BACKGROUND

CCRK (cell cycle related kinase), also known as p42 or CDCH, is a 346 amino acid nuclear protein that is involved in cell growth. Expressed in several different tissues throughout the body, CCRK functions to catalytically phosphorylate the Thr 160 residue on the cell cycle protein Cdk2 (cyclin-dependent kinase 2), thereby activating Cdk2 and allowing the cell cycle to progress. Due to its ability to control cell cycle events, CCRK is thought to be a potential oncogene in several carcinomas including glioblastoma multiforme, an aggressive primary brain tumor. Overexpression of CCRK leads to increased rates of glioblastoma tumor growth, while suppression of CCRK decreases the rate of glioblastoma tumor growth, further supporting its role as a potential oncogene. CCRK exists as a monomer and is expressed as three different isoforms produced by alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610076. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Liu, Y., Wu, C. and Galaktionov, K. 2004. p42, a novel cyclin-dependent kinase-activating kinase in mammalian cells. *J. Biol. Chem.* 279: 4507-4514.
3. Caligiuri, M., Becker, F., Murthi, K., Kaplan, F., Dedier, S., Kaufmann, C., Machl, A., Zybarth, G., Richard, J., Bockovich, N., Kluge, A. and Kley, N. 2005. A proteome-wide CDK/CRK-specific kinase inhibitor promotes tumor cell death in the absence of cell cycle progression. *Chem. Biol.* 12: 1103-1115.
4. Abbas, T. and Dutta, A. 2006. CDK2-activating kinase (CAK): more questions than answers. *Cell Cycle* 5: 1123-1124.
5. Wohlbold, L., Larochelle, S., Liao, J.C., Livshits, G., Singer, J., Shokat, K.M. and Fisher, R.P. 2006. The cyclin-dependent kinase (CDK) family member PNQALRE/CCRK supports cell proliferation but has no intrinsic CDK-activating kinase (CAK) activity. *Cell Cycle* 5: 546-554.
6. Ng, S.S., Cheung, Y.T., An, X.M., Chen, Y.C., Li, M., Li, G.H., Cheung, W., Sze, J., Lai, L., Peng, Y., Xia, H.H., Wong, B.C., Leung, S.Y., Xie, D., He, M.L., Kung, H.F. and Lin, M.C. 2007. Cell cycle-related kinase: a novel candidate oncogene in human glioblastoma. *J. Natl. Cancer Inst.* 99: 936-948.

CHROMOSOMAL LOCATION

Genetic locus: CCRK (human) mapping to 9q22.1.

SOURCE

CCRK (L-35) is a mouse monoclonal antibody raised against recombinant CCRK of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

CCRK (L-35) is recommended for detection of CCRK of human origin by 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).

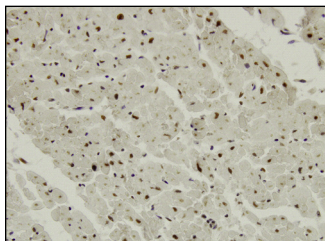
Suitable for use as control antibody for CCRK siRNA (h): sc-92544, CCRK shRNA Plasmid (h): sc-92544-SH and CCRK shRNA (h) Lentiviral Particles: sc-92544-V.

Molecular Weight of CCRK: 40 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



CCRK (L-35): sc-81838. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human heart tissue showing nuclear localization.

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.