

CCRK (A-14): sc-104829

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., et al. 2004. p42, a novel cyclin-dependent kinase-activating kinase in mammalian cells. *J. Biol. Chem.* 279: 4507-4514.
3. Caligiuri, M., et al. 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. Wohlbold, L., et al. 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.
5. Abbas, T., et al. 2006. CDK2-activating kinase (CAK): more questions than answers. *Cell Cycle* 5: 1123-1124.
6. Ng, S.S., et al. 2007. Cell cycle-related kinase: a novel candidate oncogene in human glioblastoma. *J. Natl. Cancer Inst.* 99: 936-948.

CHROMOSOMAL LOCATION

Genetic locus: CDK20 (human) mapping to 9q22.1; Cdk20 (mouse) mapping to 13 B3.

SOURCE

CCRK (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCRK of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104829 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CCRK (A-14) is recommended for detection of CCRK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CCRK (A-14) is also recommended for detection of CCRK in additional species, including bovine.

Suitable for use as control antibody for CCRK siRNA (h): sc-92544, CCRK siRNA (m): sc-142174, CCRK shRNA Plasmid (h): sc-92544-SH, CCRK shRNA Plasmid (m): sc-142174-SH, CCRK shRNA (h) Lentiviral Particles: sc-92544-V and CCRK shRNA (m) Lentiviral Particles: sc-142174-V.

Molecular Weight of CCRK: 40 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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