



ChoK (E-20): sc-23383

BACKGROUND

The major pathway for the biosynthesis of phosphatidylcholine occurs via the CDP-choline pathway. Choline kinase, the initial enzyme in the sequence, plays a role in cell growth proliferation. Hemicholinium-3 (HC-3), an inhibitor for Choline Kinase (also known as ChoK and CKI), drastically reduces entry into S phase after stimulation by growth factors. In ras-transformed cells, an increased level of phosphorylcholine (PCho) results from the consecutive activation of phospholipase D (PLD) and ChoK. ChoK and its product, PCho, have been implicated in human carcinogenesis, including the development of human breast cancer, and ChoK dysregulation is found in a variety of human tumors such as lung, colorectal, and prostate tumors. The human Choline kinase gene maps to chromosome 11q13.2.

REFERENCES

1. Jimenez, B., et al. 1995. Generation of phosphorylcholine as an essential event in the activation of Raf-1 and MAP-kinases in growth factors-induced mitogenic stimulation. *J. Cell Biochem.* 57: 141-149.
2. Hernandez-Alcoceba, R., et al. 1997. Choline kinase inhibitors as a novel approach for antiproliferative drug design. *Oncogene* 15: 2289-2301.
3. Hernandez-Alcoceba, R., et al. 1999. *In vivo* antitumor activity of choline kinase inhibitors: a novel target for anticancer drug discovery. *Cancer Res.* 59: 3112-3118.
4. Lucas, L., et al. 2001. Modulation of phospholipase D by hexadecylphosphorylcholine: a putative novel mechanism for its antitumoral activity. *Oncogene* 20: 1110-1117.
5. Ramirez de Molina, A., et al. 2002. Increased choline kinase activity in human breast carcinomas: clinical evidence for a potential novel antitumor strategy. *Oncogene* 21: 4317-4322.
6. Ramirez de Molina, A., et al. 2002. Over-expression of choline kinase is a frequent feature in human tumor-derived cell lines and in lung, prostate, and colorectal human cancers. *Biochem. Biophys. Res. Commun.* 296: 580-583.
7. LocusLink Report (LocusID: 1119). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: CHKA (human) mapping to 11q13.2; Chka (mouse) mapping to 19 A.

SOURCE

ChoK (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ChoK 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-23383 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ChoK (E-20) is recommended for detection of ChoK 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).

ChoK (E-20) is also recommended for detection of ChoK in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ChoK siRNA (h): sc-38965, ChoK siRNA (m): sc-38966, ChoK shRNA Plasmid (h): sc-38965-SH, ChoK shRNA Plasmid (m): sc-38966-SH, ChoK shRNA (h) Lentiviral Particles: sc-38965-V and ChoK shRNA (m) Lentiviral Particles: sc-38966-V.

Molecular Weight of ChoK: 50 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.

STORAGE

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

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.

MONOS
Satisfaction
Guaranteed

Try **ChoK (B-8): sc-376489** or **ChoK (B-6): sc-390060**, our highly recommended monoclonal alternatives to ChoK (E-20).