SANTA CRUZ BIOTECHNOLOGY, INC.

ChoK (H-210): sc-32907

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., del Peso, L., Montaner, S., Esteve, P. and Lacal, J.C. 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., Saniger, L., Campos, J., Nunez, M.C., Khaless, F., Gallo, M.A., Espinosa, A. and Lacal, J.C. 1997. Choline kinase inhibitors as a novel approach for antiproliferative drug design. Oncogene 15: 2289-2301.

CHROMOSOMAL LOCATION

Genetic locus: CHKA (human) mapping to 11q13.2, CHKB (human) mapping to 22q13.33; Chka (mouse) mapping to 19 A, Chkb (mouse) mapping to 15 E3.

SOURCE

ChoK (H-210) is a rabbit polyclonal antibody raised against amino acids 91-300 mapping within an internal region of ChoKα 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.

APPLICATIONS

ChoK (H-210) is recommended for detection of ChoKα isoforms 1, 2, and to a lesser extent, ChoKβ of mouse, rat and 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), 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).

ChoK (H-210) is also recommended for detection of ChoKα isoforms 1, 2, and to a lesser extent, ChoKβ in additional species, including porcine.

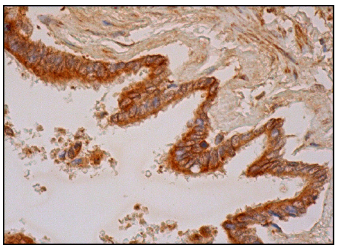
Molecular Weight of ChoK: 50 kDa.

Positive Controls: mouse embryo extract: sc-364239.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



ChoK (H-210): sc-32907. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

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.