SANTA CRUZ BIOTECHNOLOGY, INC.

ChoK (B-8): sc-376489

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.

CHROMOSOMAL LOCATION

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

SOURCE

ChoK (B-8) is a mouse monoclonal antibody raised against amino acids 91-300 mapping within an internal region of ChoKα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ChoK (B-8) is available conjugated to agarose (sc-376489 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376489 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376489 PE), fluorescein (sc-376489 FITC), Alexa Fluor® 488 (sc-376489 AF488), Alexa Fluor® 546 (sc-376489 AF546), Alexa Fluor® 594 (sc-376489 AF594) or Alexa Fluor® 647 (sc-376489 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376489 AF680) or Alexa Fluor® 790 (sc-376489 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ChoK (B-8) is recommended for detection of ChoKα isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

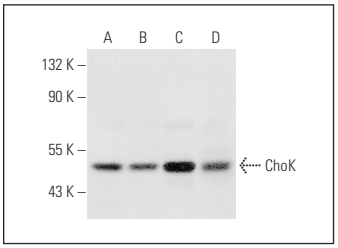
Molecular Weight of ChoK: 50 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A549 cell lysate: sc-2413 or K-562 whole cell lysate: sc-2203.

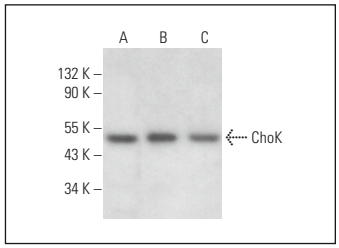
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 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



ChoK (B-8): sc-376489. Western blot analysis of ChoK expression in Jurkat (**A**), A549 (**B**), K-562 (**C**) and NIH/3T3 (**D**) whole cell lysates.



ChoK (B-8): sc-376489. Western blot analysis of ChoK expression in NIH/3T3 (**A**), Hep G2 (**B**) and A-10 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Esmaeili, M., et al. 2013. Quantitative 31 P HR-MAS MR spectroscopy for detection of response to PI3K/mTOR inhibition in breast cancer xenografts. Magn. Reson. Med. 71: 1973-1981.
2. George, A.J., et al. 2013. A functional siRNA screen identifies genes modulating Angiotensin II-mediated EGFR transactivation. J. Cell Sci. 126: 5377-5390.
3. Guerra, A.R., et al. 2021. Metabolic effects of a *Eucalyptus* bark lipophilic extract on triple negative breast cancer and non-tumor breast epithelial cells. J. Proteome Res. 20: 565-575.

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 for detailed protocols and support products.