

ChoKB (G-12): sc-398957

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. A related protein, ChoKB (also, known as choline kinase β), is a 395 amino acid enzyme that catalyzes the phosphorylation of choline by ATP in the presence of magnesium, thereby yielding phosphocholine and ADP. Like all choline kinases, ChoKB possesses ethanalamine kinase activity and catalyzes the phosphorylation of ethanolamine. The gene encoding ChoKB is located less than 1 kb upstream of the CPT1B gene, suggesting that the ChoKB gene may regulate transcription CPT1B. In mice, mutations and/or deletions in the gene encoding ChoKB are the cause of hindlimb muscular dystrophy and neonatal bone deformity.

CHROMOSOMAL LOCATION

Genetic locus: CHKB (human) mapping to 22q13.33; Chkb (mouse) mapping to 15 E3.

SOURCE

ChoKB (G-12) is a mouse monoclonal antibody raised against amino acids 1-78 mapping at the N-terminus of ChoKB of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ChoKB (G-12) is available conjugated to agarose (sc-398957 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398957 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398957 PE), fluorescein (sc-398957 FITC), Alexa Fluor® 488 (sc-398957 AF488), Alexa Fluor® 546 (sc-398957 AF546), Alexa Fluor® 594 (sc-398957 AF594) or Alexa Fluor® 647 (sc-398957 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398957 AF680) or Alexa Fluor® 790 (sc-398957 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ChoKB (G-12) is recommended for detection of ChoKB of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ChoKB siRNA (h): sc-105203, ChoKB siRNA (m): sc-142329, ChoKB shRNA Plasmid (h): sc-105203-SH, ChoKB shRNA Plasmid (m): sc-142329-SH, ChoKB shRNA (h) Lentiviral Particles: sc-105203-V and ChoKB shRNA (m) Lentiviral Particles: sc-142329-V.

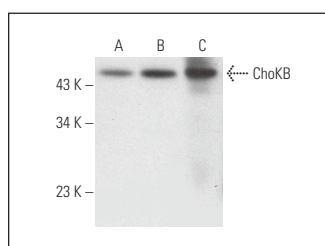
Molecular Weight of ChoKB: 42 kDa.

Positive Controls: F9 cell lysate: sc-2245, c4 whole cell lysate: sc-364186 or mouse testis extract: sc-2405.

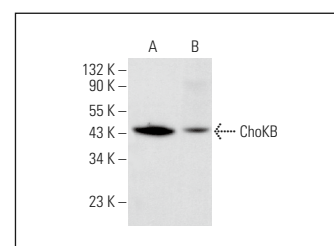
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



ChoKB (G-12): sc-398957. Western blot analysis of ChoKB expression in F9 (A) and c4 (B) whole cell lysates and mouse testis tissue extract (C).



ChoKB (G-12): sc-398957. Western blot analysis of ChoKB expression in c4 (A) and Ramos (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, R., et al. 2021. Choline kinase α 2 acts as a protein kinase to promote lipolysis of lipid droplets. *Mol. Cell* 81: 2722-2735.e9.
2. Fu, G., et al. 2021. Metabolic control of TFH cells and humoral immunity by phosphatidylethanolamine. *Nature* 595: 724-729.
3. Tavasoli, M., et al. 2022. A mouse model of inherited choline kinase β -deficiency presents with specific cardiac abnormalities and a predisposition to arrhythmia. *J. Biol. Chem.* 298: 101716.
4. Tavasoli, M., et al. 2022. Mechanism of action and therapeutic route for a muscular dystrophy caused by a genetic defect in lipid metabolism. *Nat. Commun.* 13: 1559.

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.