

CKAP5 (H-4): sc-374394

BACKGROUND

CKAP5 (cytoskeleton-associated protein 5), also known as ch-TOG (colonic hepatic tumor overexpressed gene), is a 2,032 amino acid protein that is a member of the TOG/XMAP215 family and contains nine heat repeats. CKAP5 is expressed in skeletal muscle, brain, heart, placenta, lung, liver, kidney and pancreas and is overexpressed in hepatomas and colonic tumors. During interphase, CKAP5 localizes to the perinuclear cytoplasm and the spindle poles, where it plays an important role in spindle microtubule organization. Specifically, CKAP5 is required for extrapole formation in prometaphases lacking Ark-1, a mitotic centrosomal kinase that functions as a spindle regulator and is overexpressed in tumors. CKAP5 binds to hnRNP A2 (heterogeneous nuclear ribonucleoprotein) and interacts with TACC1, TACC3 and Tubulin.

CHROMOSOMAL LOCATION

Genetic locus: CKAP5 (human) mapping to 11p11.2; Ckap5 (mouse) mapping to 2 E1.

SOURCE

CKAP5 (H-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CKAP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CKAP5 (H-4) is available conjugated to agarose (sc-374394 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374394 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374394 PE), fluorescein (sc-374394 FITC), Alexa Fluor[®] 488 (sc-374394 AF488), Alexa Fluor[®] 546 (sc-374394 AF546), Alexa Fluor[®] 594 (sc-374394 AF594) or Alexa Fluor[®] 647 (sc-374394 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374394 AF680) or Alexa Fluor[®] 790 (sc-374394 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CKAP5 (H-4) is recommended for detection of CKAP5 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 CKAP5 siRNA (h): sc-96689, CKAP5 siRNA (m): sc-142355, CKAP5 shRNA Plasmid (h): sc-96689-SH, CKAP5 shRNA Plasmid (m): sc-142355-SH, CKAP5 shRNA (h) Lentiviral Particles: sc-96689-V and CKAP5 shRNA (m) Lentiviral Particles: sc-142355-V.

Molecular Weight of CKAP5: 225 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HCT-116 whole cell lysate: sc-364175 or COLO 320DM cell lysate: sc-2226.

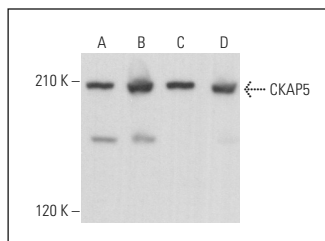
RESEARCH USE

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

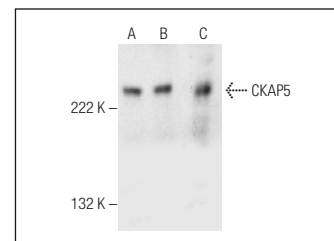
STORAGE

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

DATA



CKAP5 (H-4): sc-374394. Western blot analysis of CKAP5 expression in K-562 (A), HUV-EC-C (B), M1 (C) and Neuro-2A (D) whole cell lysates.



CKAP5 (H-4): sc-374394. Western blot analysis of CKAP5 expression in COLO 320DM (A), HCT-116 (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Ertych, N., et al. 2014. Increased microtubule assembly rates influence chromosomal instability in colorectal cancer cells. *Nat. Cell Biol.* 16: 779-791.
- Stolz, A., et al. 2015. A phenotypic screen identifies microtubule plus end assembly regulators that can function in mitotic spindle orientation. *Cell Cycle* 14: 827-837.
- Stolz, A., et al. 2015. Wnt-mediated protein stabilization ensures proper mitotic microtubule assembly and chromosome segregation. *EMBO Rep.* 16: 490-499.
- Hassan, A., et al. 2019. Adolescent idiopathic scoliosis associated POC5 mutation impairs cell cycle, cilia length and centrosome protein interactions. *PLoS ONE* 14: e0213269.
- Almeida, A.C., et al. 2022. Augmin-dependent microtubule self-organization drives kinetochore fiber maturation in mammals. *Cell Rep.* 39: 110610.
- Böhly, N., et al. 2022. Increased replication origin firing links replication stress to whole chromosomal instability in human cancer. *Cell Rep.* 41: 111836.
- Pudelko, K., et al. 2022. Increased microtubule growth triggered by microvesicle-mediated paracrine signaling is required for melanoma cancer cell invasion. *Cancer Res. Commun.* 2: 366-379.
- Ali, A., et al. 2023. Microtubule nucleation and γ TuRC centrosome localization in interphase cells require ch-TOG. *Nat. Commun.* 14: 289.

PROTOCOLS

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

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