SANTA CRUZ BIOTECHNOLOGY, INC.

CKAP2 (D-12): sc-393629

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The Power to Question

BACKGROUND

CKAP2 (cytoskeleton associated protein 2) is localized to the cytoplasm of humans and is expressed in tissues, including thymus and testis. CKAP2 is also refered to as LB1, TMAP or se20-10, and is a 682 amino acid protein which is expressed as three isoforms. CKAP2 is utilized during mitosis and is involved in regulating functions of microtubules, cellular death and the cell cycle. Before mitosis, CKAP2 is expressed in the cell cycle between phases G_1 and S, and accumulates between phases S and G_2. During mitosis, when the anaphase promoting complex is activated, CKAP2 is degraded. The regulation of CKAP2 is essential for proper spindle functions and cytokinesis, and it is thought that CKAP2 function is mediated via phosphorylation and dephosphorylation. Upon activation of p53 by CKAP2, the G_1 phase of the cell cycle is stopped, leading to cell death and apoptosis. Gastric tumors contain excessive amounts of CKAP2, which can lead to unregulated spindle functions and may be involved in the development and progression of gastric cancer.

REFERENCES

1. Udina, I.G., et al. 2001. Evolutionarily-conserved gene CKAP2,located in region 13q14.3 of the human genome, is frequently rearranged in various tumors. Genetika 37: 120-123.
2. Rakhmanaliev, E.R., et al. 2002. The structure of the human oncogenesis-associated CKAP2 (LB1) gene. Mol. Biol. 36: 985-989.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611569. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Bae, C.D., et al. 2003. Up-regulation of cytoskeletal-associated protein 2 in primary human gastric adenocarcinomas. J. Cancer Res. Clin. Oncol. 129: 621-630.
5. Tsuchihara, K., et al. 2005. CKAP2 regulates aneuploidy, cell cycling, and cell death in a p53-dependent manner. Cancer Res. 65: 6685-6691.
6. Jeon, S.M., et al. 2006. A cytoskeleton-associated protein, TMAP/CKAP2, is involved in the proliferation of human foreskin fibroblasts. Biochem. Biophys. Res. Commun. 348: 222-228.
7. Seki, A. and Fang, G. 2007. CKAP2 is a spindle-associated protein degraded by APC/C-Cdh1 during mitotic exit. J. Biol. Chem. 282: 15103-15113.

CHROMOSOMAL LOCATION

Genetic locus: CKAP2 (human) mapping to 13q14.3.

SOURCE

CKAP2 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 374-409 within an internal region of CKAP2 of human origin.

STORAGE

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

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.

Blocking peptide available for competition studies, sc-393629 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CKAP2 (D-12) is recommended for detection of CKAP2 of 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 CKAP2 siRNA (h): sc-105207, CKAP2 shRNA Plasmid (h): sc-105207-SH and CKAP2 shRNA (h) Lentiviral Particles: sc-105207-V.

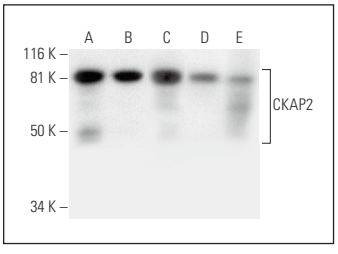
Molecular Weight of CKAP2: 75 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, NAMALWA cell lysate: sc-2234 or Ramos cell lysate: sc-2216.

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



CKAP2 (D-12): sc-393629. Western blot analysis of CKAP2 expression in U-698-M (**A**), Ramos (**B**), NAMALWA (**C**), Raji (**D**) and COLO 320DM (**E**) whole cell lysates.

RESEARCH USE

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