

# CKAP4 (C-13): sc-167469

## BACKGROUND

CKAP4 (cytoskeleton-associated protein 4), also known as p63, CLIMP-63 or ERGIC-63, is a 602 amino acid single-pass type II transmembrane protein that links the endoplasmic reticulum (ER) to the cytoskeleton. Considered a novel protein in maintaining ER morphology, CKAP4 anchors the ER to microtubules which is required for maintaining ER spatial distribution during interphase of the cell cycle. CKAP4 can be reversibly palmitoylated and phosphorylated and is a major substrate of the palmitoyl acyltransferase, ZDHHC2. It is suggested that CKAP4 binds with high affinity to an inhibitor of cell proliferation, antiproliferative factor (APF), and blocks its activity on bladder epithelial cells. Two isoforms of CKAP4 exist due to alternative splicing.

## REFERENCES

1. Klopfenstein, D.R., et al. 2001. Subdomain-specific localization of CLIMP-63 (p63) in the endoplasmic reticulum is mediated by its luminal  $\alpha$ -helical segment. *J. Cell Biol.* 153: 1287-1300.
2. Vedrenne, C., et al. 2005. Phosphorylation controls CLIMP-63-mediated anchoring of the endoplasmic reticulum to microtubules. *Mol. Biol. Cell.* 16: 1928-1937.
3. Gupta, N., et al. 2006. Identification and characterization of p63 (CKAP4/ERGIC-63/CLIMP-63), a surfactant protein A binding protein, on type II pneumocytes. *Am. J. Physiol. Lung Cell Mol. Physiol.* 291: L436-L446.
4. Conrads, T.P., et al. 2006. CKAP4/p63 is a receptor for the frizzled-8 protein-related antiproliferative factor from interstitial cystitis patients. *J. Biol. Chem.* 281: 37836-37843.
5. Wesierska-Gadek, J., et al. 2007. A new, unexpected action of olomoucine, a CDK inhibitor, on normal human cells: up-regulation of CLIMP-63, a cytoskeleton-linking membrane protein. *J. Cell. Biochem.* 102: 1405-1419.
6. Nikonov, A.V., et al. 2007. Climp-63-mediated binding of microtubules to the ER affects the lateral mobility of translocon complexes. *J. Cell Sci.* 120: 2248-2258.
7. Bates, S.R., et al. 2008. Role of P63 (CKAP4) in binding of surfactant protein-A to type II pneumocytes. *Am. J. Physiol. Lung Cell Mol. Physiol.* 295: L658-L669.
8. Zhang, J., et al. 2008. Identification of CKAP4/p63 as a major substrate of the palmitoyl acyltransferase DHHC2, a putative tumor suppressor, using a novel proteomics method. *Mol. Cell Proteomics* 7: 1378-1388.
9. Planey, S.L., et al. 2009. Palmitoylation of cytoskeleton associated protein 4 by DHHC2 regulates antiproliferative factor-mediated signaling. *Mol. Biol. Cell* 20: 1454-1463.

## CHROMOSOMAL LOCATION

Genetic locus: CKAP4 (human) mapping to 12q23.3; Ckap4 (mouse) mapping to 10 C1.

## SOURCE

CKAP4 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CKAP4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167469 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CKAP4 (C-13) is recommended for detection of CKAP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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); non cross-reactive with other CKAP family members.

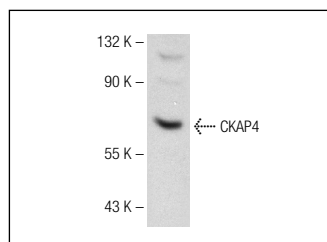
CKAP4 (C-13) is also recommended for detection of CKAP4 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CKAP4 siRNA (h): sc-95758, CKAP4 siRNA (m): sc-142354, CKAP4 shRNA Plasmid (h): sc-95758-SH, CKAP4 shRNA Plasmid (m): sc-142354-SH, CKAP4 shRNA (h) Lentiviral Particles: sc-95758-V and CKAP4 shRNA (m) Lentiviral Particles: sc-142354-V.

Molecular Weight of CKAP4: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA



CKAP4 (C-13): sc-167469. Western blot analysis of CKAP4 expression in HeLa whole cell lysate.

## 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.

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Satisfaction  
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Try **CKAP4 (A-3): sc-393544**, our highly recommended monoclonal alternative to CKAP4 (C-13).