

# Cdc50C (N-15): sc-99842

## BACKGROUND

Containing between 1,100 and 1,500 genes, chromosome 3 spans 200 million base pairs and represents 6.5 percent of total DNA. Mapping to chromosome 3, the gene encoding Cdc50C (Cell cycle control protein 50C), also known as Transmembrane protein 30C (TMEM30C), produces a 113 amino acid transmembrane protein that is specifically expressed in testis. In yeast, the Cdc50C homolog plays a role in cell polarity during division, suggesting that the human protein may be involved in spermatogenesis. Though the Cdc50C protein is evolutionarily highly conserved, in humans and chimpanzees the Cdc50C transcripts are truncated due to mutations in splicing or poly(A) signals relative to the Cdc50C gene of other species. In humans, this results in a major transcript that lacks a stop codon, therefore producing a non-functional protein, and a minor transcript that encodes a protein with 1 transmembrane domain. In mice, Cdc50C is expressed during meiosis and post-meiosis stages, further supporting the protein's role in sperm development.

## REFERENCES

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3. Saito, K., et al. 2004. Cdc50p, a protein required for polarized growth, associates with the Drs2p P-type ATPase implicated in phospholipid translocation in *Saccharomyces cerevisiae*. *Mol. Biol. Cell* 15: 3418-3432.
4. Katoh, Y., et al. 2004. Identification and characterization of CDC50A, CDC50B and CDC50C genes in silico. *Oncol. Rep.* 12: 939-943.
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6. Sakane, H., et al. 2006. The functional relationship between the Cdc50p-Drs2p putative aminophospholipid translocase and the Arf GAP Gcs1p in vesicle formation in the retrieval pathway from yeast early endosomes to the TGN. *Cell Struct. Funct.* 31: 87-108.
7. Chen, S., et al. 2006. Roles for the Drs2p-Cdc50p complex in protein transport and phosphatidylserine asymmetry of the yeast plasma membrane. *Traffic*. 7: 1503-1517.
8. Xu, P., et al. 2007. Characterization and expression of mouse Cdc50c during spermatogenesis. *Acta Biochim. Biophys. Sin.* 39: 739-744.
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## CHROMOSOMAL LOCATION

Genetic locus: TMEM30C (human) mapping to 3q12.1.

## RESEARCH USE

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

## SOURCE

Cdc50C (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of Cdc50C of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99842 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cdc50C (N-15) is recommended for detection of Cdc50C of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Cdc family members.

Suitable for use as control antibody for Cdc50C siRNA (h): sc-78073, Cdc50C shRNA Plasmid (h): sc-78073-SH and Cdc50C shRNA (h) Lentiviral Particles: sc-78073-V.

Molecular Weight of Cdc50C: 13 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.