

CCDC16 (E-13): sc-131889

BACKGROUND

CCDC16 (coiled-coil domain-containing protein 16), also known as ZNF830, OMCG1 (ovum mutant candidate gene 1) or SEL13, is a 372 amino acid protein that belongs to the C₂H₂-type zinc finger family of proteins. Localizing to the nucleus, CCDC16 contains one U1-type zinc finger motif and is involved in pre-mRNA splicing. CCDC16 functions as a component of a pre-mRNA splicing complex of the spliceosome (composed of AQR (aquarius), PRP19, CCDC16, HCNP, ISY1 and Cyclophilin E) and is required for proper RNA synthesis in the cell. Pre-mRNA splicing is essential to remove internal non-coding regions of pre-mRNA (introns) and to join the remaining segments (exons) into mRNA before translation. In preimplantation embryos, CCDC16 is believed to play an important role in cell cycle regulation. Further supporting its vital role in embryos, the disruption of CCDC16 leads to early embryonic lethality. Upon DNA damage, CCDC16 is phosphorylated by ATM or ATR.

REFERENCES

1. Bonaldo, M.F., et al. 1996. Normalization and subtraction: two approaches to facilitate gene discovery. *Genome Res.* 6: 791-806.
2. Artus, J., et al. 2005. Impaired mitotic progression and preimplantation lethality in mice lacking OMCG1, a new evolutionarily conserved nuclear protein. *Mol. Cell. Biol.* 25: 6289-6302.
3. Artus, J., et al. 2006. The cell cycle of early mammalian embryos: lessons from genetic mouse models. *Cell Cycle* 5: 499-502.
4. Sancho-Shimizu, V., et al. 2007. Molecular genetic analysis of two loci (Ity2 and Ity3) involved in the host response to infection with *Salmonella typhimurium* using congenic mice and expression profiling. *Genetics* 177: 1125-1139.
5. Kuraoka, I., et al. 2008. Isolation of XAB2 complex involved in pre-mRNA splicing, transcription, and transcription-coupled repair. *J. Biol. Chem.* 283: 940-950.

CHROMOSOMAL LOCATION

Genetic locus: ZNF830 (human) mapping to 17q12; Zfp830 (mouse) mapping to 11 C.

SOURCE

CCDC16 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCDC16 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-131889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CCDC16 (E-13) is recommended for detection of CCDC16 of mouse, rat and 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 CCDC family members.

CCDC16 (E-13) is also recommended for detection of CCDC16 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for CCDC16 siRNA (h): sc-93985, CCDC16 siRNA (m): sc-142090, CCDC16 shRNA Plasmid (h): sc-93985-SH, CCDC16 shRNA Plasmid (m): sc-142090-SH, CCDC16 shRNA (h) Lentiviral Particles: sc-93985-V and CCDC16 shRNA (m) Lentiviral Particles: sc-142090-V.

Molecular Weight of CCDC16: 42 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

RESEARCH USE

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

PROTOCOLS

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