CCDC49 (L-15): sc-164003



The Power to Question

BACKGROUND

Spliceosomes are large ribonucleoproteins that remove introns from nuclear pre-mRNA in a two-step reaction. CCDC49 (coiled-coil domain-containing protein 49), also known as Pre-mRNA-splicing factor CWC25 homolog, is a 425 amino acid protein that is involved in the catalytic steps of splicing in *Saccharomyces cerevisiae*. CCDC49 associates with a component of the Prp19-associated complex, CEF1, which is involved in spliceosome activation. It is likely that CCDC49 facilitates juxtaposition of the 5' splice site and branch point during the final step in the first catalytic reaction. There are two isoforms of CCDC49 that are produced as a result of alternative splicing events.

REFERENCES

- 1. Lamond, A.I. 1993. The spliceosome. Bioessays 15: 595-603.
- Umen, J.G. and Guthrie, C. 1995. The second catalytic step of pre-mRNA splicing. RNA 1: 869-885.
- Tarn, W.Y. and Steitz, J.A. 1997. Pre-mRNA splicing: the discovery of a new spliceosome doubles the challenge. Trends Biochem. Sci. 22: 132-137.
- Nagai, K., Muto, Y., Pomeranz Krummel, D.A., Kambach, C., Ignjatovic, T., Walke, S. and Kuglstatter, A. 2001. Structure and assembly of the spliceosomal snRNPs. Novartis Medal. Lecture Biochem. Soc. Trans. 29: 15-26.
- Nilsen, T.W. 2003. The spliceosome: the most complex macromolecular machine in the cell? Bioessays 25: 1147-1149.
- Chiu, Y.F., Liu, Y.C., Chiang, T.W., Yeh, T.C., Tseng, C.K., Wu, N.Y. and Cheng, S.C. 2009. Cwc25 is a novel splicing factor required after Prp2 and Yju2 to facilitate the first catalytic reaction. Mol. Cell. Biol. 29: 5671-5678.
- Warkocki, Z., Odenwälder, P., Schmitzová, J., Platzmann, F., Stark, H., Urlaub, H., Ficner, R., Fabrizio, P. and Lührmann, R. 2009. Reconstitution of both steps of *Saccharomyces cerevisiae* splicing with purified spliceosomal components. Nat. Struct. Mol. Biol. 16: 1237-1243.

CHROMOSOMAL LOCATION

Genetic locus: CWC25 (human) mapping to 17q12; Cwc25 (mouse) mapping to 11 D.

SOURCE

CCDC49 (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCDC49 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-164003 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CCDC49 (L-15) is recommended for detection of CCDC49 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.

Suitable for use as control antibody for CCDC49 siRNA (h): sc-93641, CCDC49 siRNA (m): sc-142117, CCDC49 shRNA Plasmid (h): sc-93641-SH, CCDC49 shRNA Plasmid (m): sc-142117-SH, CCDC49 shRNA (h) Lentiviral Particles: sc-93641-V and CCDC49 shRNA (m) Lentiviral Particles: sc-142117-V.

Molecular Weight (predicted) of CCDC49: isoforms 50/10 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat lgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat lgG-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 lgG-FITC: sc-2024 (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 or our catalog for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**