# SANTA CRUZ BIOTECHNOLOGY, INC.

# CCDC138 (N-13): sc-138183



The Power to Question

#### BACKGROUND

CCDC138 (coiled-coil domain containing 138), also known as FLJ32745, is a 685 amino acid protein expressed as 2 isoforms produced by alternative splicing. The gene that encodes CCDC138 maps to human chromosome 2q12.3. The second largest human chromosome, chromosome 2 consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

#### REFERENCES

- Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
- Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
- Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
- Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
- Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
- Marshall, J.D., et al. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
- Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28: 1114-1123.
- 8. Tabas, I. 2007. A two-carbon switch to sterol-induced autophagic death. Autophagy 3: 38-41.
- 9. Wang, D.Q. 2007. Regulation of intestinal cholesterol absorption. Annu. Rev. Physiol. 69: 221-248.

#### CHROMOSOMAL LOCATION

Genetic locus: CCDC138 (human) mapping to 2q12.3; Ccdc138 (mouse) mapping to 10 B4.

#### SOURCE

CCDC138 (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CCDC138 of human origin.

#### **RESEARCH USE**

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

#### PRODUCT

Each vial contains 100  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138183 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CCDC138 (N-13) is recommended for detection of CCDC138 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other CCDC family members.

CCDC138 (N-13) is also recommended for detection of CCDC138 in additional species, including bovine.

Suitable for use as control antibody for CCDC138 siRNA (h): sc-94315, CCDC138 shRNA Plasmid (h): sc-94315-SH and CCDC138 shRNA (h) Lentiviral Particles: sc-94315-V.

Molecular Weight of CCDC138 isoforms: 76/66 kDa.

### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluo-rescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.