SANTA CRUZ BIOTECHNOLOGY, INC.

SFT2D3 (N-14): sc-137628

BACKGROUND

SFT2D3 (SFT2 domain-containing protein 3) is a 215 amino acid multi-pass membrane protein that belongs to the SFT2 family. SFT2D3 may be involved in fusion of retrograde transport vesicles derived from an endocytic compartment with the Golgi complex. The SFT2D3 gene is conserved in chimpanzee, bovine, mouse, rat, zebrafish, fruit fly, mosquito and *C. elegans,* and maps to human chromosome 2q14.3. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare 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 related to mutations in the ALMS1 gene. Chromosome 2 contains a probable vestigial second centromere as well as vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 formed as a result of an ancient fusion of two ancestral chromosomes, which are still present in modern day apes.

REFERENCES

1. IJdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
2. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
3. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
4. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
5. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28 1114-1123.
6. Rooryck, C., et al. 2010. Array-CGH analysis of a cohort of 86 patients with oculoauriculovertebral spectrum. Am. J. Med. Genet. A 152A: 1984-1989.
7. You, Y.H., et al. 2010. Time-series gene expression profiles in AGS cells stimulated with *Helicobacter pylori.* World J. Gastroenterol. 16: 1385-1396.

CHROMOSOMAL LOCATION

Genetic locus: SFT2D3 (human) mapping to 2q14.3; Sft2d3 (mouse) mapping to 18 B1.

SOURCE

SFT2D3 (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of SFT2D3 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137628 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SFT2D3 (N-14) is recommended for detection of SFT2D3 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 SFT2D1 or SFT2D2.

SFT2D3 (N-14) is also recommended for detection of SFT2D3 in additional species, including porcine.

Suitable for use as control antibody for SFT2D3 siRNA (h): sc-94788, SFT2D3 siRNA (m): sc-153409, SFT2D3 shRNA Plasmid (h): sc-94788-SH, SFT2D3 shRNA Plasmid (m): sc-153409-SH, SFT2D3 shRNA (h) Lentiviral Particles: sc-94788-V and SFT2D3 shRNA (m) Lentiviral Particles: sc-153409-V.

Molecular Weight of SFT2D3: 22 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) Immunofluorescence: 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.

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.