SANTA CRUZ BIOTECHNOLOGY, INC.

ACOXL (N-12): sc-107383

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Acyl-coenzyme A oxidase (ACOX) proteins use FAD as a cofactor to catalyze the desaturation of very long chain acyl-CoA proteins to 2-trans-enoyl-CoA proteins, a reaction that utilizes oxygen and produces hydrogen peroxide. ACOXL (acyl-coenzyme A oxidase-like) is a 547 amino acid protein that belongs to the acyl-CoA oxidase family and is expressed as three isoforms produced by alternative splicing events. The gene that encodes ACOXL maps to human chromosome 2, the second largest human chromosome consisting of 237 million bases encoding over 1,400 genes. 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.

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. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
3. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. Nat. Biotechnol. 22: 707-716.
4. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
5. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
6. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
7. Marshall, J.D., et al. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
8. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28: 1114-1123.
9. Tabas, I. 2007. A two-carbon switch to sterol-induced autophagic death. Autophagy 3: 38-41.

CHROMOSOMAL LOCATION

Genetic locus: ACOXL (human) mapping to 2q13.

SOURCE

ACOXL (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ACOXL 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 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-107383 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACOXL (N-12) is recommended for detection of ACOXL of human and rat 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).

ACOXL (N-12) is also recommended for detection of ACOXL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACOXL siRNA (h): sc-94747, ACOXL shRNA Plasmid (h): sc-94747-SH and ACOXL shRNA (h) Lentiviral Particles: sc-94747-V.

Molecular Weight of ACOXL: 62 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.

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.