SANTA CRUZ BIOTECHNOLOGY, INC.

LCE2A-D (C-12): sc-160487

BACKGROUND

The lipid-corneocyte structure of stratum corneum is responsible for barrier activity of skin and internal barrier-forming epithelial linings. Corneocyte stability is dependent upon the outer cornified envelope and is essential for maintenance of barrier function. Within the epidermal differentiation complex on human chromosome 1 and mouse chromosome 3 lies the late cornified envelope (LCE) gene cluster, which contains multiple conserved genes encoding stratum-corneum proteins. LCE2A, B, C and D are skin specific precursors of the cornified envelope of the stratum corneum. All four proteins belong to the LCE family and map to the LCE gene cluster on human chromosome 1q21.3. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease and Usher syndrome.

REFERENCES

1. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIα. Science 280: 1753-1757.
2. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
3. Marshall, D., et al. 2001. Differentially expressed late constituents of the epidermal cornified envelope. Proc. Natl. Acad. Sci. USA 98: 13031-13036.
4. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
5. Jackson, B., et al. 2005. Late cornified envelope family in differentiating epithelia—response to calcium and ultraviolet irradiation. J. Invest. Dermatol. 124: 1062-1070.
6. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.
7. Bergboer, J.G., et al. 2011. Psoriasis risk genes of the late cornified envelope-3 group are distinctly expressed compared with genes of other LCE groups. Am. J. Pathol. 178: 1470-1477.

CHROMOSOMAL LOCATION

Genetic locus: LCE2A/LCE2B/LCE2C/LCE2D (human) mapping to 1q21.3.

SOURCE

LCE2A-D (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LCE2B 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-160487 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LCE2A-D (C-12) is recommended for detection of LCE2A, LCE2B, LCE2C and LCE2D of 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).

Molecular Weight of LCE2A-D: 11 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.

STORAGE

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

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.