SANTA CRUZ BIOTECHNOLOGY, INC.

LTA4H (m): 293T Lysate: sc-121433

BACKGROUND

Leukotrienes are biologically active compounds formed from arachidonic acid or polyunsaturated fatty acids that are important in host defense reactions and play a pathophysiological role in inflammation and allergic reactions. LTA4H (Leukotriene A4-hydrolase) is a Zn^{2+}-containing enzyme with both epoxide hydrolase and aminopeptidase activity. As an epoxide hydrolase, LTA4H catalyzes the hydration of LTA4 to leukotriene B4 (LTB4, 5S,12R-dihydroxy-6,14-*cis*-8,10-*trans*-eicosatetraenoic acid), a potent lipid chemoattractant that influences inflammation, immune responses and host defense against infection. As an aminopeptidase, LTA4H catalyzes the cleavage of amides of paranitroaniline. The human LTA4H gene encodes a 610 amino acid protein.

REFERENCES

1. Minami, M., Ohno, S., Kawasaki, H., Radmark, O., Samuelsson, B., Jornvall, H., Shimizu, T., Seyama, Y. and Suzuki, K. 1987. Molecular cloning of a cDNA coding for human leukotriene A4 hydrolase. Complete primary structure of an enzyme involved in eicosanoid synthesis. J. Biol. Chem. 262: 13873-13876.
2. Gierse, J.K., Luckow, V.A., Askonas, L.J., Duffin, K.L., Aykent, S., Bild, G.S., Rodi, C.P., Sullivan, P.M., Bourner, M.J., Kimack, N.M., et al. 1993. High-level expression and purification of human leukotriene A4 hydrolase from insect cells infected with a baculovirus vector. Protein Expr. Purif. 4: 358-366.
3. Parnas, B.L., Durley, R.C., Rhoden, E.E., Kilpatrick, B.F., Makkar, N., Thomas, K.E., Smith, W.G. and Corley, D.G. 1996. Isolation and structure of leukotriene-A4 hydrolase inhibitor: 8(S)-amino-2(R)-methyl-7-oxononanoic acid produced by *Streptomyces diastaticus*. J. Nat. Prod. 59: 962-964.
4. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 151570. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Thunnissen, M.M., Nordlund, P. and Haeggstrom, J.Z. 2001. Crystal structure of human leukotriene A(4) hydrolase, a bifunctional enzyme in inflammation. Nat. Struct. Biol. 8: 131-135.
6. Rudberg, P.C., Tholander, F., Thunnissen, M.M., Samuelsson, B. and Haeggstrom, J.Z. 2002. Leukotriene A4 hydrolase: selective abrogation of leukotriene B4 formation by mutation of aspartic acid 375. Proc. Natl. Acad. Sci. USA 99: 4215-4220.
7. LocusLink Report (LocusID: 4048). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Lta4h (mouse) mapping to 10 C2.

PRODUCT

LTA4H (m): 293T Lysate represents a lysate of mouse LTA4H transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

LTA4H (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive LTA4H antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.