IBL Data Sheet

Code No. 28075

Anti-Mouse
LRAT (Lecithin Retinol Acyltransferase) (168) Rabbit IgG Affinity Purify

Volume : 50 µg

Introduction : LRAT is a retinol-esterifying enzyme and it is mainly found in G0 stage of stellate cells (Ito cells) in liver. At stellate cells, LRAT is thought to take a role engulfing and pooling excess vitamin A released from hepatocytes (ref. 1, 3, 5). As normal hepatocytes are characterized by lipid droplets pooling esterified vitamin A, LRAT is expected to be a marker of stellate cells in G0 stage (ref. 1, 5). LRAT is also expressed in retinal pigment epithelium, small intestine epithelium and skin keratinocyte as well as liver (ref. 3, 4). The physiological significance of LRAT protein at the endothelium is not clarified, yet.
This antibody reacts with stellate cells and endothelia of mouse and rat.

Antigen : Synthetic peptide of a part of Mouse LRAT (168-184) (RYGSRISPQAEKFYDT)

Purification : Purified with antigen peptide

Form : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN_3

How to use : 1.0 mL deionized water will be added to the product (the conc. comes up 50 µg /mL)

Stability : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for immunohistochemistry with formalin fixed paraffin embedded tissues after microwave treatment or untreated, by several techniques such as Avidin Biotin Complex (ABC) Method. The optimal concentration is about 0.5 - 5 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 1 - 5 µg /mL.

Specificity : Cross-reacts with rat.

Reference :

1. Nagatsuma K, Hayashi Y, Hano H, Sagara H, Murakami K, Saito M, Masaki T, Lu T, Tanaka M, Enzan H, Aizawa Y, Tajiri H, Matsuura T. Lecithin: retinol acyltransferase protein is distributed in both hepatic stellate cells and endothelial cells of normal rodent and human liver. Liver Int. 2008 Jun 9.
2. Mezaki Y, Yoshikawa K, Yamaguchi N, Miura M, Imai K, Kato S, Senoo H. Rat hepatic stellate cells acquire retinoid responsiveness after activation in vitro by post-transcriptional regulation of retinoic acid receptor alpha gene expression. Arch Biochem Biophys. 2007 Sep 15;465(2):370-9.
3. Zolfaghari R, Ross AC. Lecithin:retinol acyltransferase from mouse and rat liver. CDNA cloning and liver-specific regulation by dietary vitamin a and retinoic acid. J Lipid Res. 2000 Dec;41(12):2024-34.
4. Ruiz A, Winston A, Lim YH, Gilbert BA, Rando RR, Bok D. Molecular and biochemical characterization of lecithin retinol acyltransferase. J Biol Chem. 1999 Feb 5;274(6):3834-41.
5. Matsuura T, Gad MZ, Harrison EH, Ross AC. Lecithin:retinol acyltransferase and retinyl ester hydrolase activities are differentially regulated by retinoids and have distinct distributions between hepatocyte and nonparenchymal cell fractions of rat liver. J Nutr. 1997 Feb;127(2):218-24.

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