

Anti-LRAT Antibody

Catalog # AP51668

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O95237
Reactivity	Human, Mouse, Rat, Rabbit, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25703

Additional Information

Gene ID	9227
Other Names	Lecithin retinol acyltransferase; Phosphatidylcholine--retinol O-acyltransferase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human LRAT. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	LRAT (HGNC:6685)
Function	Transfers the acyl group from the sn-1 position of phosphatidylcholine to all-trans retinol, producing all-trans retinyl esters (PubMed: 9920938). Retinyl esters are storage forms of vitamin A (Probable). LRAT plays a critical role in vision (Probable). It provides the all-trans retinyl ester substrates for the isomerohydrolase which processes the esters into 11-cis-retinol in the retinal pigment epithelium; due to a membrane-associated alcohol dehydrogenase, 11 cis-retinol is oxidized and converted into 11-cis- retinaldehyde which is the chromophore for rhodopsin and the cone photopigments (Probable). Required for the survival of cone photoreceptors and correct rod photoreceptor cell morphology (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Single-pass membrane protein. Rough endoplasmic reticulum. Endosome, multivesicular body. Cytoplasm, perinuclear region. Note=Present in the rough endoplasmic reticulum and multivesicular body in hepatic stellate cells. Present in the rough endoplasmic

reticulum and perinuclear region in endothelial cells (By similarity).

Tissue Location

Hepatic stellate cells and endothelial cells (at protein level). Found at high levels in testis and liver, followed by retinal pigment epithelium, small intestine, prostate, pancreas and colon. Low expression observed in brain. In fetal tissues, expressed in retinal pigment epithelium and liver, and barely in the brain

References

Ruiz A.,et al.J. Biol. Chem. 274:3834-3841(1999).

Zolfaghari R.,et al.Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.

Ota T.,et al.Nat. Genet. 36:40-45(2004).

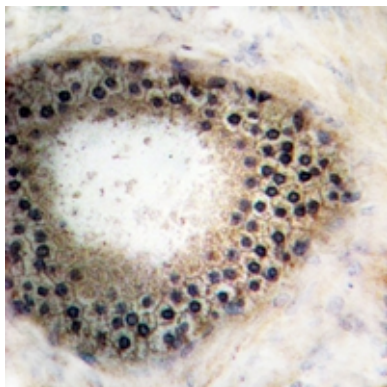
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Mondal M.S.,et al.Biochemistry 39:5215-5220(2000).

Images



Western blot analysis of LRAT expression in SHSY5Y (A) whole cell lysates. (Predicted band size: 25 kD; Observed band size: 50 kD)



Immunohistochemical analysis of LRAT staining in human prostate carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of LRAT staining in HuvEc cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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