

LRAT Polyclonal Antibody

Catalog No: YT2587

Reactivity: Human; Mouse; Rat

Applications: WB;IHC;IF;ELISA

Target: LRAT

Fields: >>Retinol metabolism;>>Metabolic pathways;>>Vitamin digestion and

absorption

Gene Name: LRAT

Protein Name: Lecithin retinol acyltransferase

O95237

Q9JI60

Human Gene Id: 9227

Human Swiss Prot

No:

Mouse Gene Id: 79235

Mouse Swiss Prot

No:

Rat Gene Id: 64047

Rat Swiss Prot No: Q9JI61

Immunogen: The antiserum was produced against synthesized peptide derived from human

LRAT. AA range:111-160

Specificity: LRAT Polyclonal Antibody detects endogenous levels of LRAT protein.

Formulation : Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source: Polyclonal, Rabbit, IgG

Dilution: WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:10000. Not

yet tested in other applications.



Purification: The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

Storage Stability: -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band: 27kD

Cell Pathway: Retinol metabolism;

Background: lecithin retinol acyltransferase (phosphatidylcholine--retinol O-

acyltransferase)(LRAT) Homo sapiens The protein encoded by this gene localizes to the endoplasmic reticulum, where it catalyzes the esterification of all-trans-retinol into all-trans-retinyl ester. This reaction is an important step in vitamin A metabolism in the visual system. Mutations in this gene have been associated with early-onset severe retinal dystrophy and Leber congenital amaurosis 14. Alternative splicing results in multiple transcript variants. [provided

by RefSeq, Aug 2014],

Function: catalytic activity:Phosphatidylcholine + retinol--[cellular-retinol-binding-protein] =

2-acylglycerophosphocholine + retinyl-ester--[cellular-retinol-binding-protein]., disease:Defects in LRAT are a cause of severe early-onset retinal dystrophy (RD) [MIM:604863]., enzyme regulation:Inhibited by all-trans-retinyl alpha-bromoacetate and N-boc-L-biocytinyl-11-aminoundecane chloro-methyl ketone (BACMK)., function:Transfers the acyl group from the sn-1 position of phosphatidylcholine to all-trans retinol, producing all-trans retinyl esters. Retinyl esters are storage forms of vitamin A. LRAT plays a critical role in vision. 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

Subcellular Location:

Endoplasmic reticulum membrane; Single-pass membrane protein. Rough endoplasmic reticulum. Endosome, multivesicular body. Cytoplasm, perinuclear region. 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).

Expression:

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 retiral pigment anithalium and liver, and barely in the brain.

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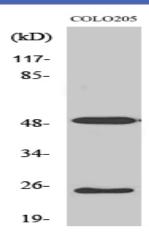
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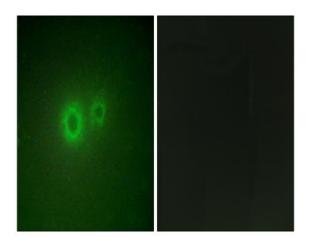


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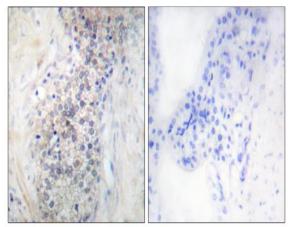
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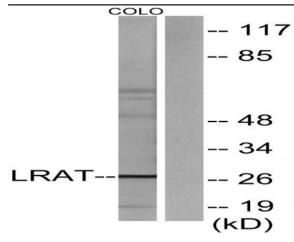
Western Blot analysis of various cells using LRAT Polyclonal Antibody diluted at 1:500



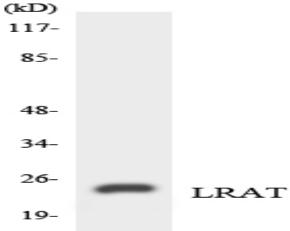
Immunofluorescence analysis of HUVEC cells, using LRAT Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human prostate carcinoma tissue, using LRAT Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from COLO205 cells, using LRAT Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from COLO205 cells using LRAT antibody.