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LPGAT1 Blocking Peptide (Center)

Synthetic peptide
Catalog # BP22020c

Specification

LPGAT1 Blocking Peptide (Center) - Product Information

Primary Accession Q92604

LPGAT1 Blocking Peptide (Center) - Additional Information

Gene ID 9926

Other Names
Acyl-CoA:lysophosphatidylglycerol acyltransferase 1, 2.3.1.-, LPGAT1, FAM34A, KIAA0205

Target/Specificity
The synthetic peptide sequence is selected from aa 164-177 of HUMAN LPGAT1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LPGAT1 Blocking Peptide (Center) - Protein Information

Name LPGAT1 (HGNC:28985)

Function
Lysophospholipid acyltransferase involved in fatty acyl chain remodeling of glycerophospholipids in the endoplasmic reticulum membrane (By similarity). Selectively catalyzes the transfer and esterification of saturated long-chain fatty acids from acyl-CoA to the sn-1 position of 1-lyso-2-acyl phosphatidylethanolamines (1-lyso-PE, LPE), with a preference for stearoyl CoA over palmitoyl CoA as acyl donor (PubMed:36049524). Acts in concert with an unknown phospholipase A1 to convert palmitate phosphatidylethanolamine (PE) species into stearate ones. Provides substrates to the PE methylation pathway, controlling stearate/palmitate composition of PE and phosphatidylcholine (PC) species with an overall impact on de novo hepatic lipid synthesis, body fat content and life span (By similarity). Can acylate lysophosphatidylglycerols (LPG) using various saturated fatty acyl-CoAs as acyl donors (PubMed:15485873). Can also acylate monoacylglycerols with a preference for 2-monoacylglycerols over 1-monoacylglycerols (By similarity). Has no activity toward lysophosphatidic acids (LPA) (By similarity).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location
Highly expressed in liver and placenta. Also expressed in peripheral blood, lung, kidney and brain. Detected at lower levels in colon. High expression is detected in brain and testis

LPGAT1 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

LPGAT1 Blocking Peptide (Center) - Images

LPGAT1 Blocking Peptide (Center) - Background

Lysophoshatidylglycerol (LPG) specific acyltransferase that recognizes various acyl-CoAs and LPGs as substrates but demonstrates a clear preference for long chain saturated fatty acyl-CoAs and oleoyl-CoA as acyl donors. Prefers oleoyl-LPG over palmitoyl-LPG as an acyl receptor and oleoyl-CoA over lauroyl-CoA as an acyl donor.

LPGAT1 Blocking Peptide (Center) - References

Yang Y.,et al.J. Biol. Chem. 279:55866-55874(2004).
Ji D.,et al.Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
Nagase T.,et al.DNA Res. 3:321-329(1996).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.