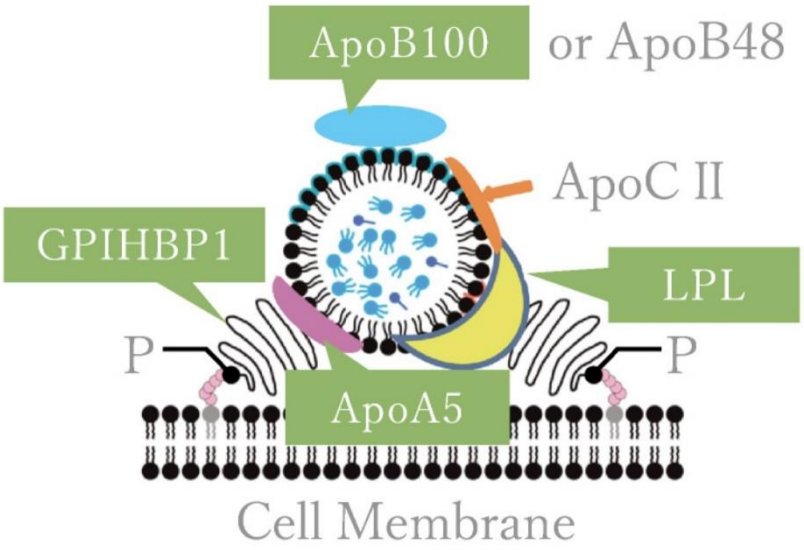
GPIHBP1 ELISA



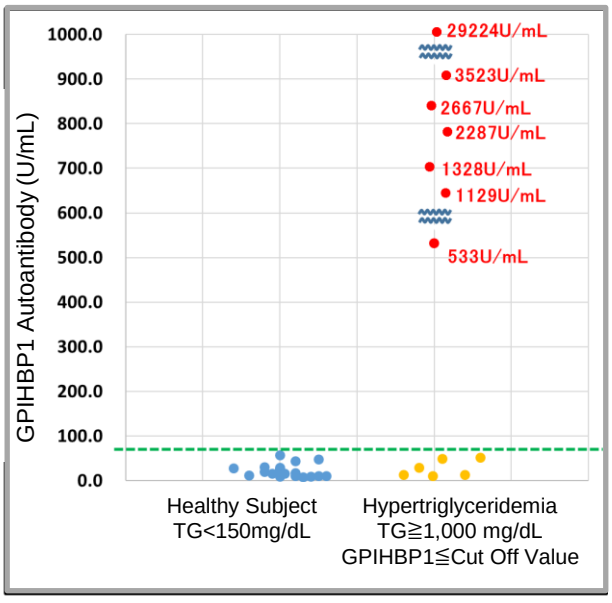
- **#27179 Human GPIHBP1 (mass)**

  * Sample types : Human
  * Measuring Samples : Serum, EDTA-plasma
  * Measurement Range : 7.8 - 500 pg/mL

- **#27267 Human GPIHBP1 Autoantibody** **New**

  * Sample types : Human
  * Measuring Samples : Serum, EDTA-plasma, Heparin plasma, Post-heparin EDTA-plasma
  * Measurement Range : 0.008 - 0.500 U/mL

GPIHBP1 (Glycosylphosphatidylinositol anchored high density lipoprotein binding protein 1) is an anchor protein that is modified by glycolipid and it has been known that it exists on a capillary endothelial cell membrane and **involves with metabolism of triglyceride rich (TG-rich) lipoprotein (triglyceride)**. GPIHBP1 transports lipoprotein lipase (LPL) synthesized and secreted in adipocyte or skeletal muscle cells into capillary lumen by transcytosis and it binds LPL on the surface of endothelial cells so that GPIHBP1 has an critical role for metabolizing TG-rich lipoprotein.



Data provided from the poster presented at The 50th Annual Scientific Meeting of the Japan Atherosclerosis Society

It has been already know that type I hyperlipemia (hyperchylomicronemia) can be caused by GPIHBP1 gene mutation, however, the new insight regarding existence of GPIHBPI autoantibody as a novel disease entity has been reported on the following paper published by New England Journal of Medicine (NEJM).

According to the new insight, GPIHBP1 antibody against to GPIHBP1 protein **interferes the binding between GPIHBP1 and LPL, then it blocks the transport of LPL by GPIHBP1**. At the end, severe hyperchylomicronemia is caused by the phenomenon as same as gene mutation.

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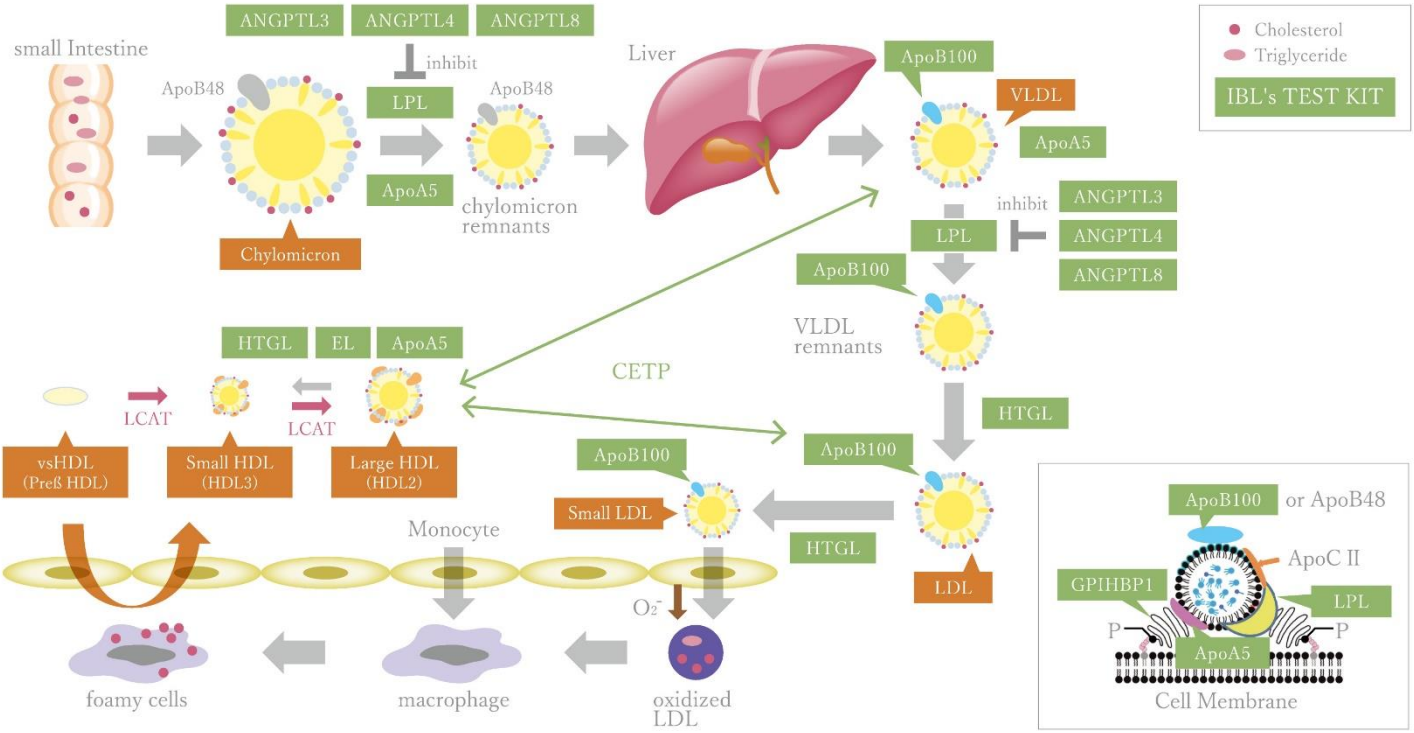
Lipid Panel

※ The products are research use only. It cannot be used for diagnostic nor any medical purpose.

Useful for Research of Lipid related Diseases



Comprehensive Product Lineup

#27191 h_ApoA5
#27181 h_ApoB100
#27263 h_EL C-Term
#27182 h_EL (FL)
#27180 h_Serum HTGL
#27179 h_GPIHBP1
New #27267 h_GPIHBP1 Autoantibody

#27745 h_ANGPTL2
#27750 h_ANGPTL3 (h.s.)
#27749 h_ANGPTL4
#27795 h_ANGPTL8
#27185 h_LPL/HTGL (Activity)*
#27264 h_LPL/HTGL (Activity) Control Plus*

*The assays are not ELISA.

References

GPIHBP1 Autoantibody

GPIHBP1 autoantibody syndrome during interferon β1a treatment. Eguchi J et al. J Clin Lipidol. Jan-Feb 2019;13(1):62-69.

Autoantibodies against GPIHBP1 as a Cause of Hypertriglyceridemia. Beigneux AP et al. N Engl J Med. 2017 Apr 27;376(17):1647-1658.

GPIHBP1 (mass)

Detailed analysis of lipolytic enzymes in a Japanese woman of familial lipoprotein lipase deficiency - Effects of pemafibrate treatment. Minamizuka T et al. Clin Chim Acta. 2020 Jul 17;510:216-219.

Association between skeletal muscle mass and serum concentrations of lipoprotein lipase, GPIHBP1, and hepatic triglyceride lipase in young Japanese men. Matsumoto R et al. Lipids Health Dis. 2019 Apr 4;18(1):84.

GPIHBP1 autoantibodies in a patient with unexplained chylomicronemia. Hu X et al. J Clin Lipidol. Jul-Aug 2017;11(4):964-971.

An enzyme-linked immunosorbent assay for measuring GPIHBP1 levels in human plasma or serum. Miyashita K et al. J Clin Lipidol. 2018 Jan - Feb;12(1):203-210.e1.

ApoA5 ApoB100 ANGPTL2 ANGPTL3 (h.s.) ANGPL4 ANGPL8 EL (FL) EL C-Term

GPIHBP1 GPIHBP1 Autoantibody Serum HTGL LPL/HTGL Activity