

GPIHBP1 (G-19): sc-87808

BACKGROUND

Chylomicrons are large lipoprotein particles that consist of triglycerides, phospholipids, cholesterol and proteins. Chylomicrons transport dietary lipids from the intestines to other locations in the body. The triglycerides in chylomicrons are hydrolyzed by lipoprotein lipase (LPL) along the luminal surface of capillaries, mainly in heart, skeletal muscle and adipose tissue. GPIHBP1 (glycosylphosphatidylinositol anchored high density lipoprotein binding protein 1) is a capillary endothelial cell protein that provides a platform for LPL-mediated processing of chylomicrons. Consisting of 184 amino acids, GPIHBP1 is a single-pass membrane protein that may be regulated by dietary factors and by PPAR γ . Mutations in the gene encoding GPIHBP1 are linked to chylomicronemia syndrome, a rare genetic disorder caused by LPL deficiency and is characterized by enlarged liver and spleen, inflammation of the pancreas, fatty deposits under the skin and possibly deposits in the retina of the eye.

REFERENCES

1. Gin, P., et al. 2007. Normal binding of lipoprotein lipase, chylomicrons, and apo-AV to GPIHBP1 containing a G56R amino acid substitution. *Biochim. Biophys. Acta* 1771: 1464-1468.
2. Véniant, M.M., et al. 2008. Lipoprotein size and susceptibility to atherosclerosis—insights from genetically modified mouse models. *Curr. Drug Targets* 9: 174-189.
3. Gin, P., et al. 2008. The acidic domain of GPIHBP1 is important for the binding of lipoprotein lipase and chylomicrons. *J. Biol. Chem.* 283: 29554-29562.
4. Beigneux, A.P., et al. 2008. Glycosylation of Asn-76 in mouse GPIHBP1 is critical for its appearance on the cell surface and the binding of chylomicrons and lipoprotein lipase. *J. Lipid Res.* 49: 1312-1321.
5. Davies, B.S., et al. 2008. The expression of GPIHBP1, an endothelial cell binding site for lipoprotein lipase and chylomicrons, is induced by peroxisome proliferator-activated receptor- γ . *Mol. Endocrinol.* 22: 2496-2504.
6. Beigneux, A.P., et al. 2009. GPIHBP1 and lipolysis: an update. *Curr. Opin. Lipidol.* 20: 211-216.
7. Beigneux, A.P., et al. 2009. GPIHBP1, a GPI-anchored protein required for the lipolytic processing of triglyceride-rich lipoproteins. *J. Lipid Res.* 50: S57-S62.
8. Olivecrona, G., et al. 2009. Mutation of conserved cysteines in the Ly6 domain of GPIHBP1 in familial chylomicronemia. *J. Lipid Res.* E-published.
9. Franssen, R., et al. 2010. Chylomicronemia with low postheparin lipoprotein lipase levels in the setting of GPIHBP1 defects. *Circ. Cardiovasc. Genet.* E-published.

CHROMOSOMAL LOCATION

Genetic locus: GPIHBP1 (human) mapping to 8q24.3.

SOURCE

GPIHBP1 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GPIHBP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87808 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPIHBP1 (G-19) is recommended for detection of GPIHBP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPIHBP1 siRNA (h): sc-77539, GPIHBP1 shRNA Plasmid (h): sc-77539-SH and GPIHBP1 shRNA (h) Lentiviral Particles: sc-77539-V.

Molecular Weight of GPIHBP1: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **GPIHBP1 (F-4): sc-376598** or **GPIHBP1 (B-5): sc-398175**, our highly recommended monoclonal alternatives to GPIHBP1 (G-19).