

# GPIHBP1 (F-4): sc-376598

## 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 $\gamma$ . 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. Veniant, 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

GPIHBP1 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 123-161 within an internal region of GPIHBP1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GPIHBP1 (F-4) is available conjugated to agarose (sc-376598 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376598 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376598 PE), fluorescein (sc-376598 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376598 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376598 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376598 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376598 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376598 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376598 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376598 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

GPIHBP1 (F-4) is recommended for detection of GPIHBP1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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.

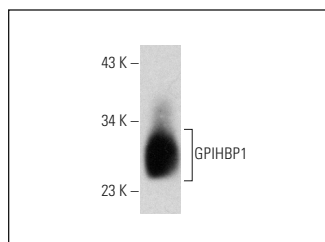
Molecular Weight of GPIHBP1: 28 kDa.

Positive Controls: human adipose tissue extract: sc-363750.

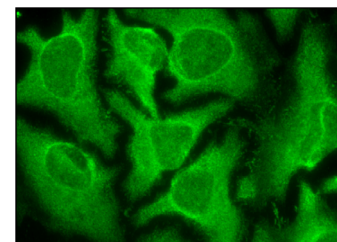
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



GPIHBP1 (F-4): sc-376598. Western blot analysis of GPIHBP1 expression in human adipose tissue extract.



GPIHBP1 (F-4): sc-376598. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## 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](http://www.scbt.com) for detailed protocols and support products.

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