

MTP (C-1): sc-515742

BACKGROUND

Microsomal triglyceride transfer protein (MTP), catalyzes the transport of cholesteryl ester, triglyceride and phospholipid between phospholipid surfaces. MTP is a heterodimer consisting of MTP and PDI (protein disulfide isomerase). It is required for the secretion of plasma lipoproteins containing apolipoprotein β . It is negatively regulated by Insulin and positively regulated by cholesterol. MTP, which localizes to the endoplasmic reticulum (ER), is expressed primarily in small intestine and liver, kidney, testis and ovary. It is not expressed in epithelial cells. Defects in the MTP gene can cause abetalipoproteinemia (Abl) which is an autosomal recessive lipoprotein metabolism disorder.

CHROMOSOMAL LOCATION

Genetic locus: MTTP (human) mapping to 4q23; Mtp (mouse) mapping to 3 G3.

SOURCE

MTP (C-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of MTP of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MTP (C-1) is available conjugated to agarose (sc-515742 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515742 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515742 PE), fluorescein (sc-515742 FITC), Alexa Fluor® 488 (sc-515742 AF488), Alexa Fluor® 546 (sc-515742 AF546), Alexa Fluor® 594 (sc-515742 AF594) or Alexa Fluor® 647 (sc-515742 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515742 AF680) or Alexa Fluor® 790 (sc-515742 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

MTP (C-1) is recommended for detection of MTP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 MTP siRNA (h): sc-45275, MTP siRNA (m): sc-45276, MTP shRNA Plasmid (h): sc-45275-SH, MTP shRNA Plasmid (m): sc-45276-SH, MTP shRNA (h) Lentiviral Particles: sc-45275-V and MTP shRNA (m) Lentiviral Particles: sc-45276-V.

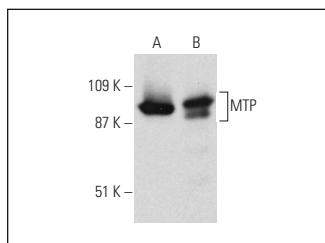
Molecular Weight of MTP: 97 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human small intestine extract: sc-364225.

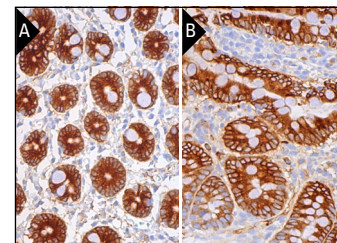
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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 κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MTP (C-1): sc-515742. Western blot analysis of MTP expression in Hep G2 whole cell lysate (A) and human small intestine tissue extract (B).



MTP (C-1): sc-515742. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum (A) and rat small intestine (B) tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

- Zhang, J., et al. 2020. miR-130b is a potent stimulator of hepatic VLDL assembly and secretion via marked induction of microsomal triglyceride transfer protein (MTP). *Am. J. Physiol. Endocrinol. Metab.* 318: E262-E275.
- Roger, C., et al. 2020. Simultaneous inhibition of peripheral CB1R and iNOS mitigates obesity-related dyslipidemia through distinct mechanisms. *Diabetes* 69: 2120-2132.
- Li, P., et al. 2021. Gut inflammation exacerbates high-fat diet induced steatosis by suppressing VLDL-TG secretion through HNF4 α pathway. *Free Radic. Biol. Med.* 172: 459-469.

STORAGE

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

PROTOCOLS

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

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