

MTP (D-4): sc-515743



The Power to Question

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 B. 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.

REFERENCES

1. Shoulders, C.C., et al. 1994. The abetalipoproteinemia gene is a member of the vitellogenin family and encodes an α -helical domain. *Nat. Struct. Biol.* 1: 285-286.
2. Hagan, D.L., et al. 1994. Transcriptional regulation of human and hamster microsomal triglyceride transfer protein genes. Cell type-specific expression and response to metabolic regulators. *J. Biol. Chem.* 269: 28737-28744.

CHROMOSOMAL LOCATION

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

SOURCE

MTP (D-4) 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 IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MTP (D-4) 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.

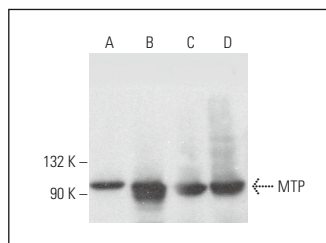
Molecular Weight of MTP: 97 kDa.

Positive Controls: mouse liver extract: sc-2256, human liver extract: sc-363766 or rat liver extract: sc-2395.

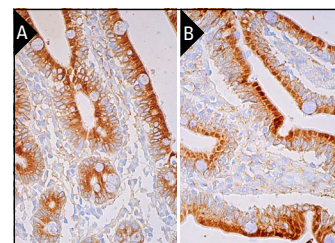
RECOMMENDED SUPPORT REAGENTS

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 (D-4): sc-515743. Western blot analysis of MTP expression in human liver (A), rat small intestine (B), rat liver (C) and mouse liver (D) tissue extracts.



MTP (D-4): sc-515743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum (A) and human small intestine (B) tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgG κ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. Grubaugh, C.R., et al. 2024. Microsomal triglyceride transfer protein is necessary to maintain lipid homeostasis and retinal function. *FASEB J.* 38: e23522.

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 for detailed protocols and support products.