Technical Data Sheet

Purified Mouse Anti-MTP

Product Information

Material Number:	**612022**
Alternate Name:	Microsomal Triglyceride transfer Protein
Size:	50 µg
Concentration:	250 µg/ml
Clone:	8/MTP
Immunogen:	Mouse MTP aa. 91-288
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Mouse Tested in Development: Rat
Target MW:	97 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The microsomal triglyceride transfer protein (MTP) catalyzes the transport of triglyceride, cholesteryl ester, and phospholipid between membranes within the lumen of microsomes in hepatocytes and enterocytes. MTP forms a heterodimer with the 58 kDa protein disulfide isomerase. PDI catalyzes the isomerization of intramolecular disulfide bridges, thereby allowing them to generate their most thermodynamically stable configuration within proteins. MTP is mutated in abetalipoproteinemia, which results from defects in apolipoprotein-B (apoB)-containing lipoproteins. A lack of MTP expression prevents secretion of apoB from mammalian cells, leading to intracellular degradation. In the C-terminal region, MTP has structural homology to apoB and the lamprey lipovitellin protein. This region contains a membrane binding helix (Helix A), and a triglyceride binding helix (Helix B). Mutations in Helix B cause abetalipoproteinemia. In addition, inhibitors of MTP activity may be important therapeutics for lowering atherogenic lipoprotein levels. Thus, MTP is a microsomal protein that is required for transport of lipids between membranes in liver and small intestines.

Western blot analysis of MTP on a mouse liver lysate.
Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10,000 dilution of the mouse anti-MTP antibody.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/support/resources/cell_biology/index.jsp

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611458	Mouse Liver Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen Z, Newberry EP, Norris JY, Xie Y, Luo J, Kennedy SM, Davidson NO. ApoB100 is required for increased VLDL-triglyceride secretion by microsomal triglyceride transfer protein in ob/ob mice. *J Lipid Res.* 2008; 49(9):2013-2022. (Clone-specific: Western blot)

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Nakamuta M, Chang BH, Hoogeveen R, Li WH, Chan L. Mouse microsomal triglyceride transfer protein large subunit: cDNA cloning, tissue-specific expression and chromosomal localization. *Genomics.* 1996; 33(2):313-316. (Biology)

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Read J, Anderson TA, Ritchie PJ. A mechanism of membrane neutral lipid acquisition by the microsomal triglyceride transfer protein. *J Biol Chem.* 1999; 275(39):30372-30377. (Biology)

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