

Product Information



Adipose Triglyceride Lipase Blocking Peptide

Catalog No. 10008492

Triglycerides are the most efficient form of energy storage in mammalian adipose tissue during times of caloric excess. Adipose triglyceride lipase (ATGL) is one of the key enzymes involved in the mobilization of fatty acids from triglyceride stores in adipose tissue, catalyzing the conversion of triacylglycerols to diacylglycerols.¹ Inhibition of ATGL markedly decreases total adipose acyl-hydrolase activity, and thus may be a potential drug target for the diabetic pathology.¹ ATGL mRNA is detected in a wide range of tissues including adipose, lung, skeletal muscle, testis, heart, brain, and kidney, with adipose tissue expressing the highest level.² Human ATGL is 504 amino acids in length with an estimated molecular weight of 55.2 kDa. Cayman's ATGL polyclonal antibody detects the enzyme at 56 kDa by western blot from tissues and cells such as brown fat, liver, murine macrophages, and HepG2 cells.

Laboratory Procedures

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The ATGL blocking peptide (human ATGL amino acids 382-400) can be used in conjunction with Cayman's ATGL Polyclonal Antibody (Catalog No. 10006409) to block protein-antibody complex formation during immunochemical analysis of ATGL.

Reconstitute the lyophilized peptide with 200 µl of PBS or distilled water. Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the ATGL Polyclonal Antibody (Catalog No. 10006409) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 20 µl of peptide.*
2. Incubate for 1 hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

1. Zimmermann, R., Strauss, J.G., Haemmerle, G., *et al.* Fat mobilization in adipose tissue is promoted by adipose triglyceride lipase. *Science* **306**, 1383-1386 (2004).
2. Villena, J.A., Roy, S., Sarkadi-Nagy, E., *et al.* Desnutrin, an adipocyte gene encoding a novel patatin domain-containing protein, is induced by fasting and glucocorticoids. Ectopic expression of desnutrin increases triglyceride hydrolysis. *J. Biol. Chem.* **279**(45), 47066-47075 (2004).

Related Product

Adipose Triglyceride Lipase Polyclonal Antibody - Cat. No. 10006409

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 11/01/2007