

Product Information



Endothelial Lipase (human) Blocking Peptide

Catalog No. 10004111

Endothelial lipase (EL) is a member of the triglyceride lipase gene family. It functions primarily as a phospholipase and has low triglyceride lipase activity. It has been shown to be a major genetic determinant for concentration, structure, and metabolism of high-density lipoprotein, which protects against atherosclerosis.^{1,2} It was originally cloned from endothelial cells and was found to be expressed in a distinct and complementary tissue-restricted fashion, with high-level expression in the liver, placenta, lung, ovary, and macrophage.³ The wide-spread distribution of this protein suggests that it plays a general role in lipid metabolism. Immunohistochemical studies demonstrate that EL is expressed in infiltrating cells such as macrophages within atheromatous plaques, in addition to endothelial and smooth muscle cells in non-atherosclerotic coronary arteries. Furthermore, EL expression is detected in the neovasculature within atheromatous plaques in atherosclerotic coronary arteries, indicating that EL may have unique functional roles in atherosclerosis.⁴ Human EL has an estimated molecular weight of 57 kDa.

Laboratory Procedures

This vial contains 200 µg peptide in 200 µl TBBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The EL (human) blocking peptide (human amino acids 19-32) can be used in conjunction with Cayman's EL (human) Polyclonal Antibody (Catalog No. 100030) to block protein-antibody complex formation during immunochemical analysis of EL.

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

1. Mix the EL (human) Polyclonal Antibody (Catalog No. 100030) 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. Ishida, T., Choi, S., Kundu, R.K., *et al.* Endothelial lipase is a major determinant of HDL level. *J. Clin. Invest.* **111**(3), 347-355 (2003).
2. Ma, K., Cilingiroglu, M., Otvos, J.D., *et al.* Endothelial lipase is a major genetic determinant for high-density lipoprotein concentration, structure, and metabolism. *Proc. Natl. Acad. Sci. USA* **100**(5), 2748-2753 (2003).
3. Hirata, K-i., Dichek, H.L., Cioffi, J.A., *et al.* Cloning of a unique lipase from endothelial cells extends the lipase gene family. *J. Biol. Chem.* **274**(20), 14170-14175 (2003).
4. Azumi, H., Hirata, K-i., Ishida, T., *et al.* Immunohistochemical localization of endothelial cell-derived lipase in atherosclerotic human coronary arteries. *Cardiovascular Res.* **58**, 647-654 (2003).

Related Product

Endothelial Lipase (human) Polyclonal Antibody - Cat. No. 100030

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.

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