

Product Information



FABP4 Blocking Peptide

Catalog No. 10006248

FABP4 is primarily expressed in adipocytes but is also expressed in activated macrophages, indicating that the protein plays a critical role in foam cell formation and thus atherosclerosis.^{1,2} FABP4 was first purified from murine 3T3-L1 adipocytes and then from human adipocytes and was named as ALBP.^{3,4} The expression of FABP4 is developmentally regulated by fatty acids, PPAR γ agonists, and insulin.^{5,6} In mice, deficiency of FABP4 prevents the development of hyperinsulinemia and insulin resistance in genetic and diet-induced obesity.^{7,8} Cayman's FABP4 polyclonal antibody can be used in western blot and immunocytochemistry with samples of human, rat, and murine origin. The blocking peptide can be used together with the antibody for a negative control in these procedures.

Laboratory Procedures

This vial contains 200 μ g peptide in 200 μ l TBBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The FABP4 blocking peptide (amino acids 103-118) can be used in conjunction with Cayman's FABP4 Polyclonal Antibody (Catalog No. 10004944) to block protein-antibody complex formation during immunochemical analysis of FABP4.

Reconstitute the lyophilized peptide with 200 μ l 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 FABP4 Polyclonal Antibody (Catalog No. 10004944) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 μ l of antibody and 20 μ l 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

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3. Matarese, V. and Bernlohr, D.A. Purification of murine adipocyte lipid-binding protein. Characterization as a fatty acid- and retinoic acid-binding protein. *J. Biol. Chem.* **263(28)**, 14544-14551 (1988).
4. Baxa, C.A., Sha, R.S., Buelt, M.K., *et al.* Human adipocyte lipid-binding protein: Purification of the protein and cloning of its complementary DNA. *Biochemistry* **28**, 8683-8690 (1989).
5. Distel, R.J., Robinson, G.S., and Spiegelman, B.M. Fatty acid regulation of gene expression. Transcriptional and post-transcriptional mechanisms. *J. Biol. Chem.* **267(9)**, 5937-5941 (1992).
6. Melki, S.A. and Abumrad, N.A. Expression of the adipocyte fatty acid-binding protein in streptozotocin-diabetes: Effects of insulin deficiency and supplementation. *J. Lipid Res.* **34**, 1527-1534 (1993).
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8. Uysal, K.T., Scheja, L., Wiesbrock, S.M., *et al.* Improved glucose and lipid metabolism in genetically obese mice lacking aP2. *Endocrinology* **141(9)**, 3388-3396 (2000).

Related Product

FABP4 Polyclonal Antibody - Cat. No. 10004944

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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