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Product Information



Serum Retinol Binding Protein 4 Blocking Peptide

Item No. 10007682

Serum retinol binding protein (sRBP4) binds one equivalent of vitamin A and is one of the major retinol carriers found in the blood of mammals.^{1,2} Human RBP4 is a monomeric 21 kDa β -sheet-rich protein that contains three disulfide bonds and belongs to the lipocalin protein family.³ sRBP4 is synthesized and sequestered in hepatocytes until retinol binding triggers its secretion.³ In plasma, sRBP4 typically forms a 1:1 complex with the 55 kDa tetrameric protein transthyretin (TTR) which prevents RBP from being removed from the plasma by glomerular filtration.⁴ Recent studies have shown that sRBP4 is an adipocyte-derived 'signal' that may contribute to the pathogenesis of type 2 diabetes.^{5,6} Elevation of sRBP4 causes systemic insulin resistance whereas reduction of serum concentrations improves insulin action.^{5,7,8} The highest known concentrations of this protein exist in serum, liver, and skeletal muscle.^{5,8,9}

Laboratory Procedures

This vial contains 200 μ g peptide in 200 μ l TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The sRBP blocking peptide (human amino acids 28-37) can be used in conjunction with Cayman's sRBP4 Polyclonal Antibody (Item No. 10007681) to block protein-antibody complex formation during immunochemical analysis of sRBP4.

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 sRBP4 Polyclonal Antibody (Item No. 10007681) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 40 μ l of antibody and 40 μ l of peptide.*
2. Incubate for one 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. Noy, N. Retinoid-binding proteins: Mediators of retinoid action. *Biochem J.* **348**, 481-495 (2000).
2. Xie, Y., Lashuel, H.A., Miroy, G.J., *et al.* Recombinant human retinol-binding protein refolding, native disulfide formation, and characterization. *Protein Expression and Purification* **14**, 31-37 (1998).
3. Cowan, S.W., Newcomer, M.E., and Jones, T.A. Crystallographic refinement of human serum retinol binding protein at 2Å resolution. *Proteins: Structure, Function, and Genetics* **8**, 44-61 (1990).
4. Sivaprasadarao, A. and Findlay, J.B.C. Expression of functional human retinol-binding protein in *Escherichia coli* using a secretion vector. *Biochem J.* **296**, 209-215 (1993).
5. Yang, Q., Graham, T.E., Mody, N., *et al.* Serum retinol binding protein 4 contributes to insulin resistance in obesity and type 2 diabetes. *Nature* **436**, 356-362 (2005).
6. Muoio, D.M. and Newgard, C.B. A is for adipokine. *Nature News and Views* **436**, 337-338 (2005).
7. Graham, T.E., Yang, Q., Blüher, M., *et al.* Retinol-binding protein 4 and insulin resistance in lean, obese, and diabetic subjects. *N. Engl. J. Med.* **354(24)**, 2552-2563 (2006).
8. Polonsky, K.S. Retinol-binding protein 4, insulin resistance, and type 2 diabetes. *N. Engl. J. Med.* **354(24)**, 2596-2598 (2006).
9. Tamori, Y., Sakaue, H., and Kasuga, M. RBP4, an unexpected adipokine. *Nature Med.* **12(1)**, 30-31 (2006).

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