



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# RBP (h2): 293T Lysate: sc-170840

## BACKGROUND

Retinol (vitamin A) is transported in the blood bound to its carrier protein, retinol-binding protein (RBP), also designated plasma retinol-binding protein (PRBP) or RBP4. A member of the lipocalin family, RBP conveys retinol from stores in the liver to peripheral tissues. In plasma, RBP binds transthyretin (TTR, formerly called prealbumin) to prevent glomerular filtration of low molecular weight RBP in the kidneys. The stability of this complex holds diagnostic importance because the molar ratio of RBP:TTR provides an indirect way to indicate marginal vitamin A deficiency. Vitamin A deficiency blocks the secretion of RBP resulting in defective delivery and supply to epidermal cells. Originally identified solely as a transporter protein, recent studies correlating increased levels of RBP expression in adipose tissue with Insulin resistance have generated research into the possible roles the protein may play in the pathogenesis of type 2 diabetes and obesity.

## REFERENCES

1. van Bennekum, A.M., et al. 1993. Retinol uptake from retinol-binding protein (RBP) by liver parenchymal cells *in vitro* does not specifically depend on its binding to RBP. *Biochemistry* 32: 1727-1733.
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3. Yamamoto, Y., et al. 1997. Interactions of transthyretin (TTR) and retinol-binding protein (RBP) in the uptake of retinol by primary rat hepatocytes. *Exp. Cell Res.* 234: 373-378.
4. Naylor, H.M., et al. 1999. The structure of human retinol-binding protein (RBP) with its carrier protein transthyretin reveals an interaction with the carboxy terminus of RBP. *Biochemistry* 38: 2647-2653.
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6. Rosales, F.J., et al. 2002. Determination of a cut-off value for the molar ratio of retinol-binding protein to transthyretin (RBP:TTR) in Bangladeshi patients with low hepatic vitamin A stores. *J. Nutr.* 132: 3687-3692.
7. Monaco HL. 2002. Three-dimensional structure of the transthyretin-retinol-binding protein complex. *Clin. Chem. Lab. Med.* 40: 1229-1236.
8. Raghu, P., et al. 2003. A new method for purification of human plasma retinol-binding protein and transthyretin. *Biotechnol. Appl. Biochem.* 38: 19-24.
9. Yang, Q., Graham, T.E., Mody, N., Preitner, F., Peroni, O.D., Zabolotny, J.M., Kotani, K., Quadro, L. and Kahn, B.B. 2005. Serum retinol binding protein 4 contributes to Insulin resistance in obesity and type 2 diabetes. *Nature* 436: 356-362.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: RBP4 (human) mapping to 10q23.33.

## PRODUCT

RBP (h2): 293T Lysate represents a lysate of human RBP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

RBP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive RBP antibodies. Recommended use: 10-20 µl per lane.

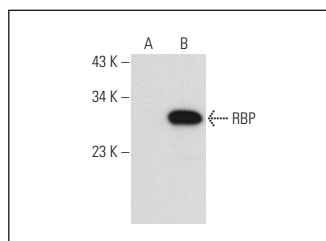
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RBP (F-12): sc-46688 is recommended as a positive control antibody for Western Blot analysis of enhanced human RBP expression in RBP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

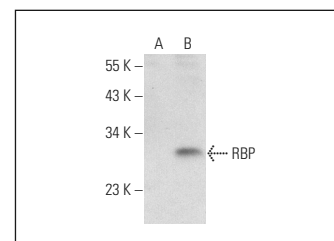
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



RBP (F-12): sc-46688. Western blot analysis of RBP expression in non-transfected: sc-117752 (A) and human RBP transfected: sc-170840 (B) 293T whole cell lysates.



RBP (C-4): sc-48384. Western blot analysis of RBP expression in non-transfected: sc-117752 (A) and human RBP transfected: sc-170840 (B) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.