

DESCRIPTION

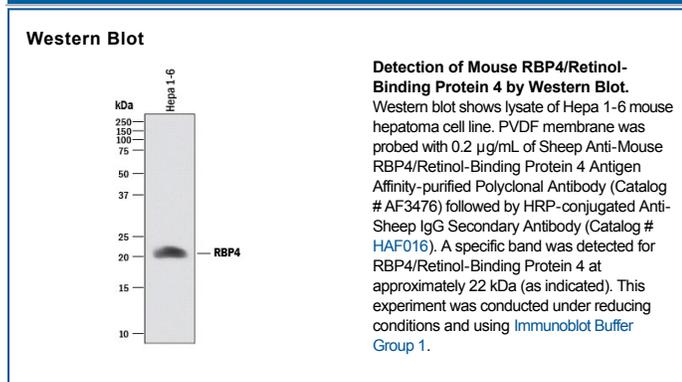
Species Reactivity	Mouse
Specificity	Detects mouse RBP4 in direct ELISAs and Western blots. In these formats, approximately 10% cross-reactivity with recombinant human RBP4 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse RBP4 (R&D Systems, Catalog # 3476-LC) Glu19-Leu201 Accession # Q00724
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Retinol (also known as vitamin A) is unstable and insoluble in the aqueous solution. However, retinol becomes quite stable and soluble in plasma due to its tight interaction with retinol-binding protein 4 (RBP4), also known as plasma retinol-binding protein (1 - 3). A prototypic member of the lipocalin superfamily, RBP4 has a β-barrel structure with a well-defined cavity. It is secreted from the liver, a process requiring the availability of retinol. RBP4 delivers retinol from the liver to the peripheral tissues. In plasma, the RBP4-retinol complex interacts with transthyretin (TTR), also known as thyroxine-binding protein and prealbumin. The retinol-RBP4-TTR complex prevents the loss of RBP4 by filtration through the kidney and increases the stability of the retinol-RBP4 complex. Defects in RBP4 cause retinol-binding protein deficiency, which affects night vision. Serum RBP4 levels are elevated in insulin-resistant mice and humans with obesity and type 2 diabetes, implying that RBP4, an adipocyte-derived signal, may be a biomarker and a drug target for the two diseases.

References:

1. Zanotti, G. and R. Berni (2004) *Vitamins and Hormones* **69**:271.
2. Newcomer, M.E. and D.E. Ong (2000) *Biochim. Biophys. Acta* **1482**:57.
3. Yang, Q. *et al.* (2005) *Nature* **436**:356.