

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects mouse RBP4/Retinol-Binding Protein 4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 100% cross-reactivity with recombinant human RBP4 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 423614
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse RBP4/Retinol-Binding Protein 4 Glu19-Leu201 Accession # Q00724
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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. The amino acid sequence of mouse RBP4 is 99%, 86%, 83% and 75% identical to that of rat, human/chimpanzee, dog and chicken.

PRODUCT SPECIFIC NOTICES

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