

Human RBP4/Retinol-Binding Protein 4 Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 393005

Catalog Number: IC3378T
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human RBP4/Retinol-Binding Protein 4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 25% cross-reactivity with recombinant mouse RBP4 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 393005
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human RBP4/Retinol-Binding Protein 4 Glu19-Leu201 Accession # P02753
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	HepG2 human hepatocellular carcinoma cell line fixed with paraformaldehyde and permeabilized with methanol

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. <ul style="list-style-type: none"> 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 (1, 2). 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. 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.

References:

- Zanotti, G. and R. Berni. (2004) *Vitamins and Hormones* **69**:271.
- Newcomer, M.E. and D.E. Ong. (2000) *Biochim. Biophys. Acta* **1482**:57.

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