

**AM33316PU-S****Monoclonal Antibody to Retinol Binding Protein / RBP - Purified**

<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	0.2 mg/ml
<b>Background:</b>	Retinol Binding Protein is a single-chain glycoprotein belonging to the superfamily of hydrophobic molecule transporter proteins, which is responsible for the transport of Retinol (vitamin A1) from the liver to peripheral target tissues. RBP is synthesised by hepatic parenchymal cells where it becomes bound to its ligand retinol and is then released into the circulation, where it binds further to the protein transthyretin, to form a transporting complex. An increasing number of studies suggest that the subsequent release of retinol from RBP at the plasma membrane occurs through interaction of RBP with specific membrane receptors.
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
<b>Clone:</b>	G4E4
<b>Immunogen:</b>	Human Retinol Binding Protein (RBP) purified from plasma. <b>Genename:</b> RBP
<b>Format:</b>	<b>State:</b> Liquid purified IgG fraction from Bioreactor Concentrate <b>Purification:</b> Protein A/G Chromatography <b>Buffer System:</b> 10mM PBS <b>Preservatives:</b> 0.05% Sodium Azide <b>Stabilizers:</b> 0.05% BSA
<b>Applications:</b>	<b>ELISA:</b> Use BSA free Antibody for coating. <b>Immunofluorescence:</b> 1-2 µg/ml. <b>Western Blotting:</b> 0.5-1 µg/ml. <b>Immunoprecipitation:</b> 1-2 µg/500 µg protein lysate. <b>Immunohistochemistry on Frozen Sections:</b> 1-2 µg/ml for 30 minutes at RT. <b><u>Positive Control:</u></b> Liver or placenta. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Molecular Weight:</b>	21-25kDa

### Specificity:

Recognizes a protein of 21kDa-25kDa, identified as retinol binding protein (RBP). Its epitope localizes between aa 74-182 of Human RBP. This Monoclonal Antibody recognizes reduced and carboxy-methylated RBP (RCM-RBP) as well as the circulatory RBP but not the native RBP, thereby suggesting that its epitope becomes accessible either on unfolding or upon binding of RBP to transthyretin (prealbumin). RBP is responsible for distributing retinol from the retinoid stores in the liver to the various target tissues. Once secreted into the blood with bound retinol, the vitamin carrier circulates complexed with transthyretin prior to vitamin delivery at the plasma membrane through a receptor-mediated mechanism.

**Cellular Localization:** Cytoplasmic.

**Species:** Human, Monkey, Goat, Rabbit, Rat, and Mouse.  
Other species not tested.

### Storage:

Store undiluted at 2-8°C.  
Shelf life: one year from despatch.

### General Readings:

1. Reddy K, Karande AA, Adiga PR. Common epitopes of serum retinol-binding proteins: a study with monoclonal antibodies. *Biochem Int.* 1990;21(2):367-76. PubMed PMID: 1698367.
2. Reddy BM, Karande AA, Adiga PR. A common epitope of beta-lactoglobulin and serum retinol-binding proteins: elucidation of its core sequence using synthetic peptides. *Mol Immunol.* 1992 Apr;29(4):511-6. PubMed PMID: 1373468.
3. Reddy BM, Karande AA, Adiga PR. Antigenic determinants of human serum retinol binding protein as probed with monoclonal antibodies. *Mol Immunol.* 1993 Oct;30(15):1355-60. PubMed PMID: 7694086.
4. Sundaram M, Sivaprasadarao A, DeSousa MM, Findlay JB. The transfer of retinol from serum retinol-binding protein to cellular retinol-binding protein is mediated by a membrane receptor. *J Biol Chem.* 1998 Feb 6;273(6):3336-42. PubMed PMID: 9452451.