

Retinol Binding Protein (RBP), in serum and urine, for **IMMAGE® 800**

General information: structure, function ...

Plasma Retinol Binding Protein, usually known by the acronyms RBP or RBP4, is a low molecular weight protein (21 KDa), produced in the liver and adipose tissues.

In plasma, for the most part RBP is bound to Prealbumin. The complex works as a solubilizer and carrier system of vitamin A (Retinol) to specific receptors in the tissues, and at the same time prevents its loss from oxidation and glomerular filtration, substantially increasing its serum half-life.

The fraction of free RBP (<10%), not bound to Prealbumin, has a short half-life in serum given that it passes freely through the glomerular membrane.

RBP in serum - Clinical Significance

The values of RBP in plasma are elevated in type 2 Diabetes Mellitus, obesity, metabolic syndrome, cardiovascular disease and chronic kidney disease.

Decreased values due to proteinuria, hepatocellular carcinoma, hyperparathyroidism, cystic fibrosis or other causes, can pose a serious threat to transport of vitamin A to tissues.

RBP in urine - Clinical Significance

In normal situation, the RBP filtered by the glomerulus is almost completely reabsorbed by the proximal renal tubules, where it is catabolized, and then only very little amount appears in the final excreted urine

The elevation of urinary excretion of RBP is a good marker of tubular dysfunction due to any cause or pathology (transplants, diabetes, poisoning, etc.), because of its high sensitivity, stability and large dynamic range (a complete blockage of tubular reabsorption elevates the normal values by a factor of 104-105).

Assay Performances and Characteristics

- **Non-competitive NIPIA Assay:** Kinetic Immunoassay, enhanced with polystyrene particles, for their use on *Beckman Coulter's IMMAGE® 800* Immunochemical Systems.
- Reagents, prediluted Calibrators and Controls in ready-to-use containers.
- Detection Limit - serum: <0.25 mg/dl
Detection Limit - urine: <0.05 mg/dl
- Excellent precision and reproducibility:
- No lipid interference at 500 mg/dl.
- Single calibration (common channel) for serum and urine.

Catalogue

3diag - RBP - 800 Kit

REF TD-42660

▽ 100 test

P/N *Beckman Coulter*: **B28037**

Contains Reagents, prediluted Calibrators (6 levels) and Controls (2 levels) for serum and urine.

Also available for other analytical platforms. For further information, please contact the Customer Support Service at support@3diag.com