

Retinol Binding Protein (RBP), in serum and urine, for Turbidimetry

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 serum 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 10^4 - 10^5).

Assay Performances and Characteristics

- ➔ **Turbidimetric Immunoassays (TIA)**, enhanced with polystyrene particles, for their use on Clinical Chemistry automatic analyzers.
- ➔ Ready-to-use Reagents, prediluted Calibrators and two level Controls, for serum and urine
- ➔ Detection Limit - serum: <0.25 mg/dl
- ➔ Excellent precision and reproducibility.
- ➔ Detection Limit - urine: <0.05 mg/dl
- ➔ No lipid interference at 500 mg/dl.

Catalogue

3diag - RBP - Tia Kit

 TD-42675  100 test

EAN/GTIN: 8434477309076

Contains Reagents, Calibrators and Controls

3diag - U-RBP - Tia Kit

 TD-42675-U  100 test

EAN/GTIN: 8434477309083

Contains Reagents, Calibrator and Controls

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