

# RETINOL BINDING PROTEIN ASSAY



Diabetic  
Marker

Retinol Binding Protein (RBP) is a ~21 kDa serum protein whose main function is to deliver retinol from liver stores to peripheral tissues<sup>1</sup>. Serum RBP-4 levels are elevated in insulin resistant states in humans<sup>2</sup>, suggesting a role in insulin resistance and type II diabetes mellitus.

RBP binds retinol (vitamin A) with a 1:1 stoichiometry. RBP has been shown to be a useful surrogate marker for retinol because of the correlation between retinol and RBP in serum, which implies that RBP may be used to monitor vitamin A deficiency (VAD)<sup>3</sup>.

## ***DIAZYME RETINOL BINDING PROTEIN ASSAY ADVANTAGES***

- Exceptional assay range: 6.8-130 mg/L
- Fast test results (under 10 minutes) for a rapid turnaround time
- Liquid stable immunoturbidimetric reagent, calibrators and controls requires no preparation; saving time
- Wide range of instrument parameters available for simplifying implementation

## ***REGULATORY STATUS***

510(k) Exempt;  

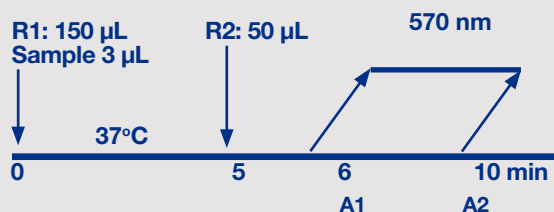
# RETINOL BINDING PROTEIN ASSAY

Dual Vial  
Liquid Stable

## ASSAY SPECIFICATIONS

<b>Method</b>	Latex Enhanced Immunoturbidimetric
<b>Sample Type &amp; Volume</b>	• Serum Sample Volume 3 µL
<b>Method Comparison</b>	N = 54 y-Intercept = 2.672 Slope = 1.0056 R <sup>2</sup> = 0.9545
<b>Linearity</b>	Up to 130.0 mg/L
<b>LOB LOD LOQ</b>	0.65 mg/L 1.04 mg/L 6.8 mg/L
<b>Calibration Levels</b>	6-Point Calibration
<b>No Hook Effect</b>	Tested up to 424 mg/L

### RBP Assay Procedure\*



#### \*Analyzer Dependent

For a list of validated parameters please contact Diazyme technical support at 858-455-4768 or email [support@diazyme.com](mailto:support@diazyme.com)

1. Kanai, et.al. J.Clin.Invest. 1968;47, 2025-43.
2. Yang, et.al. Nature 2005;436(7049), 356-62.
3. Wu, Alan H. B. Tietz Clinical Guide to Laboratory Tests. 4th ed. St. Louis, MO: Saunders/Elsevier, 2006.

## ASSAY PRECISION

The precision of the Diazyme RBP Assay was evaluated according to Clinical Laboratory Standards Institute (CLSI) EP5-A guideline.

### Within-Run Precision:

	Control 1	Control 2	Serum 1	Serum 2
<b>N</b>	40	40	40	40
<b>Mean (mg/L)</b>	33.6	80.4	30.9	46.5
<b>SD (mg/L)</b>	0.28	0.67	0.38	0.32
<b>CV (%)</b>	0.8	0.8	1.2	0.7

### Total Precision:

	Control 1	Control 2	Serum 1	Serum 2
<b>N</b>	40	40	40	40
<b>Mean (mg/L)</b>	33.6	80.4	30.9	46.5
<b>SD (mg/L)</b>	0.56	1.29	1.0	0.53
<b>CV (%)</b>	1.7	1.6	3.2	1.1

## ASSAY INTERFERENCE

The following substances do not interfere with this assay at the levels tested as defined by less than 10% bias:

Interferent	Concentration
Hemoglobin	Up to 1000 mg/dL
Bilirubin	Up to 40 mg/dL
Bilirubin Conjugated	Up to 40 mg/dL
Triglycerides	Up to 1000 mg/dL
Absorbic Acid	Up to 176 mg/dL
Rheumatoid Factor	Up to 220 IU/mL

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