

TURBICHEM APOLIPOPROTEIN - B APO-B

(Turbidimetry Method)

KIT NAME	KIT SIZE	CAT. NO
Turbichem - APO - B	1 x 40 ml	TAPB00040D



INTRODUCTION

Apolipoprotein B (Apo B) is intended for Invitro quantitative determination of Apo B in human serum. Apolipoprotein B (APO B) is the major protein component of low density lipoprotein (LDL). It enables the reaction with LDL receptors in the liver and on cell walls and transports cholesterol from the liver to tissue cells. Studies have shown APO B to have a direct relationship to coronary artery disease and an inverse relationship with APO A1. APO B levels are useful in assessment of cardiovascular risk in addition to LDL cholesterol levels. Elevated levels of APO B can be an indication of increased cardiovascular risk even when total cholesterol and LDL cholesterol are within the normal range.

METHOD PRINCIPLE

The Kit utilizes latex-enhanced immunoturbidimetry to measure the Apo-B level in human serum or plasma. During the test, APO B in the sample binds with the specific anti APO-B antibody to cause agglutination. The turbidity caused by agglutination is detected optically by chemistry, analyzer. The change in absorbance is proportional to the level of APO-B in the sample. The actual concentration is obtained by comparing with a calibration curve with known concentrations.

KIT CONTENTS

R1 - Apo - B Buffer	1 x 30 ml
R2 - Apo - B antibody	1 x 10 ml
R3 - Apo - B Calibrator	1 vial

R3 Apo-B calibrator is in lyophilized form, which we can be reconstituted as per the instruction mentioned in the vial label

The reagents when stored at 2-8°C are stable up to expiry date printed on the package. The reagents are stable for 7-10 days on board the analyser at 2-10°C. Protect from light and avoid contamination.

WORKING REAGENT PREPARATION AND STABILITY

Assay can be performed with use of separate R1-Apo-B and R2-Apo-B reagents of 3 parts of R1-Apo-B with 1 part of R2-Apo-B. Avoid foaming.

CONCENTRATIONS IN THE TEST

R1 - Glycine buffer solution. Sodium azide < 0.1%

R2 - Anti-APO B antibodies, glycine buffer, sodium azide < 0.1%

WARNINGS AND NOTES

1. The Kit is for in vitro diagnostic use only. Not for use in humans or animals.
2. The instructions must be followed to obtain accurate results.
3. Do not use the reagents beyond the expiration date.
4. Treat all specimens as infectious. Proper handling and disposal procedures of specimens and test materials should be strictly followed

ADDITIONAL EQUIPMENT

- Automatic analyzer or photometer able to read at 340 nm
- Thermostat at 37°C
- General laboratory equipment

SPECIMEN

Follow standard laboratory procedures to collect serum samples. It is recommended to perform test immediately after sample collection. If the test cannot be done immediately, store sample at 2-4°C for up to 3 days or at -20°C for up to 6 months. Avoid repeated freezing and thawing.

PLOTTING OF MULTIPOINT CURVE

The Turbichem Apo-B is based on Non-Linear Reactions, hence it is strongly recommended to run Multi-standard mode to plot the Multi-point curve to have better accuracy and precise result.

Serial Dilution Step

	1st	2nd	3rd	4th	5th
Calibrator	100 µl	50 µl from 1st Tube	50 µl from 2nd Tube	50 µl from 3rd Tube	50 µl from 4th Tube
Normal Saline	0	50 µl	50 µl	50 µl	50 µl
Ratio of Dilution	Neat	1/2	1/4	1/8	1/16

PROCEDURE

These reagents may be used both for manual assay and in several automatic analyzers. Applications for them are available on request.

Wavelength 340 nm
Temperature 37°C
Cuvette 1 cm

Pipette into the cuvette:

Reagent	Calibrator (C)	Test (T)
R1 Apo - B Buffer	750 µl	750 µl
Calibrator	10 µl	
Sample	-	10 µl
Mix well and incubate for 5 mins. at 37° C		
R2 - Apo - B Antibody	250 µl	250 µl

Mix well & incubate for 5 min. at 37°C. Measure the absorbance of calibrator & sample

CALCULATION

Apo-B concentration = $\frac{\text{Abs. Test}}{\text{Concentration}} \times \text{Calibrator}$

Abs. Calibrator

REFERENCE VALUES

60 to 100 mg/dl

It is recommended for each laboratory to establish its own reference ranges for local population.

QUALITY CONTROL

To ensure adequate quality control, each run should include assayed normal and abnormal controls. If commercial controls are not available it is recommended that known value samples be aliquoted, frozen and used as controls

PERFORMANCE CHARACTERISTICS

- **Linearity** : 30 to 200 mg/dL
- **Precision** : within Run CV ≤ 4 %
- **Specificity / Interferences**

No interference detected for bilirubin upto 60 mg/dL and hemoglobin 10 g/L, triglycerides 1000 mg/dL

WASTE MANAGEMENT

Please refer to local legal requirements.

LITERATURE

1. Raz, A., et al, J. Biol. Chem. 244: 12(1969).
2. Kottke BA, et al. Mayo Clin. Proc. 1986; 61: 313.
3. Ritchie, RF (ed). Serum Proteins in Clinical Medicine, Volume 1 laboratory Section. Scarborough, ME: Foundation for Blood Research; 12.01-5; 1996.
4. Snidermann AD. Can. J. Cardiol. 1988; 4 Suppl.: 24 A.
5. Sandkamp M. Diagnose & Labor 1990; 40: 37.

SYSTEM PARAMETERS

Method	End Point
Wavelength	340 nm
Zero Setting	Reagent Blank
Temperature Setting	37° C
Incubation Temperature	37° C
Incubation Time	5 mins + 5 mins
Delay Time	----
Read Time	----
No. of Reading	2
Interval Time	----
Sample Volume	0.01 ml (10 ul)
Reagent Volume	1.0 ml (1000 ul)
Standard Concentration	Refer Callibrator vial
Units	mg / dl
Factor	----
Reaction Slope	Increasing
Linearity	200 mg/dl



Genuine Biosystem Private Limited

Plot No.97 & 98, kattabomman street,
Parvathy Nagar Extension,
Old Perungalathur, Chennai - 600063, India.
Ph: +91-44-48681845
Email: genuinebiosystem@gmail.com
website: www.genuinebiosystem.com