

# Nephchem Apolipoprotein E (Nephelometry method)



KIT NAME	KIT SIZE	CAT. NO
Nephchem - Apo E	25 Tests	NAPE01025T

## INTRODUCTION

Apolipoprotein E (Apo E) is intended for Invitro quantitative determination of Apo E in human serum. Apolipoprotein E (APO E) is a class of apolipoprotein found in the chylomicron and VLDLs that binds to a specific receptor on liver cells and peripheral cells. APO E is needed for the normal catabolism of triglyceride-rich lipoprotein constituents. APO E deficiency gives rise to high cholesterol and triglyceride levels, promoting atherosclerosis. APO E levels are also associated with cardiovascular disease, Alzheimer's disease, immunoregulation, and cognition

## METHOD PRINCIPLE

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

## KIT CONTENTS

Reagent kit - box	
R1 - Apo E buffer	1 x 4.9 ml
R2 - Apo E antibody	1 x 1.6 ml
Test Card	1 no
Accessories kit box	
Cuvettes	25 nos
Big tips	25 nos
small tips	50 nos

## Working reagent preparation and stability

Reagent R1 and R2 are ready to use liquid stable at 2-8°C till the expiry date printed on the package.

## Concentrations in the test

R1 - Tris buffer solution, polyethylene glycol, Sodium azide < 0.1%  
R2 - anti-APO E antibodies, buffer, sodium azide < 0.1%

## Warnings and notes

- The Kit is for *in vitro* diagnostic use only. Not for use in humans or animals.
- The instructions must be followed to obtain accurate results.
- Do not use the reagents beyond the expiration date.
- Treat all specimens as infectious. Proper handling and disposal procedures of specimens and test materials should be strictly followed.
- Reagents contain less than 0.1% sodium azide as preservative; avoid contact with skin and eyes, flush with copious amounts of water when disposing.

## SPECIMEN

Follow standard laboratory procedures to collect serum or plasma (EDTA or heparin) 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 5 days.

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## PROCEDURE

It is very important for antigen-antibody reaction needs the pre-warm of both reagents and samples. Along with GB NEPHCHEM equipment, dry bath incubator will be provided, in that dedicated R1, R2 and sample positions were available. Please use the respective positions for desired pre-warm temperature of 37°C

- Step 1:** Insert Test Card to Card reader slot and display will show promptly add R1 + S (sample)
- Step 2:** Pipette out 180 µl of R1 into dedicated cuvette and add 5 µl of sample (serum) and place the cuvette in the reading chamber
- Step 3:** After the incubation, the display will show promptly add R2
- Step 4:** Pipette out 60 µl of R2 using sensor pipette connected with machine into the cuvette
- Step 5:** Once the reaction time got over, the result will show in the display and (if external printer connected then it will get print out)

## REFERENCE VALUES

2.9 to 5.3 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 kit can be cross checked with commercially available third party Immunological quality control or use recommended GB Immunology Quality control.

## PERFORMANCE CHARACTERISTICS

- Linearity:** 0.1 to 10.0 mg/dL
- Precision:** within Run CV ≤ 6 %
- 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

- Mahley RW (1988). "Apolipoprotein E: cholesterol transport protein with expanding role in cell biology." *Science* 240 (4852): 622-30
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- Singh PP, Singh M, Mastana SS (2006). "APOE distribution in world populations with new data from India and the UK." *Ann.Hum. Biol.* 33 (3): 279-308.
- Strittmatter WJ, Roses AD (1995). Apolipoprotein E and Alzheimer disease." *proc. Natl. Acad. Sci. U.S.A.* 92 (11): 4725-7.
- Zhang HL, Wu J, Zhu J (2010). The role of Apolipoprotein E in guilain-barre syndrome and experimental autoimmune neuritis. *J.Biomed. Biotechnol.* 2010: 357412. [gbv.com](http://www.gbv.com)



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