

DELTA LIPASE

(Methyl Resorufin)

ORDER INFORMATION

CODE : DL2701 - R1 - 1 x 10 ML + R2 - 1 x 2 ML

DL2702 - R1 - 2 x 10 ML + R2 - 2 x 2 ML

INTENDED USE :

This reagent kit is intended for "*in vitro*" quantitative determination of LIPASE activity in serum & plasma.

CLINICAL SIGNIFICANCE :

Lipases are glycoproteins with a molecular weight of 47000 Daltons. Lipase hydrolyzes the ester linkages. Specifically, lipase catalyzes the partial hydrolysis of dietary triglycerides in the intestine to the 2-monoglyceride intermediate, with the production of long chain fatty acids.

PRINCIPLE :

The chromogenic lipase substrate 1,2-O-dilauryl-rac-glycero-3-glutaric acid-(6-methylresorufin)-ester is cleaved by the catalytic action of alkaline lipase solution to form 1,2-O-dilauryl-rac-glycerol and an unstable intermediate glutaric acid-(6-methylresorufin)-ester. This decomposes spontaneously in alkaline solution to form glutaric acid and methylresorufin. The color intensity of the red dye formed is directly proportional to lipase activity and can be determined photometrically.

REAGENT COMPOSITION :

Reagent 1 : Buffer Reagent

Reagent 2 : Substrate Reagent

Lipase Calibrator Concentration : Printed on the Vial.

SAMPLES :

Li-, Na- vagy NH₄-heparin plasma, serum.

EDTA-, oxalate-, fluoride or citrated plasma lead to decreased results.

WORKING REAGENT PREPARATION & STABILITY :

Reagent 1 & Reagent 2 are Ready to use and are stable up to the expiry date stated on the label.

LIPASE Calibrator : Dissolve with distilled water (Qty Printed on the vial). Cap and mix gently to dissolve contents. Reconstituted calibrator is stable for 7 days at 2 to 8°C or 3 months at -20°C; aliquots into small volumes and freeze.

GENERAL SYSTEM PARAMETERS :

Reaction type	Fixed Time
Wave length	580 nm
Light Path	1 Cm
Reaction Temperature	37°C
Blank / Zero Setting	With Distilled Water
Reagent Volume	1.2 ml
Sample Volume	10 µl
Lag / Delay Time	60 Sec.
Read Time	60 Sec.
Interval Time	60 Sec.
Calibrator Concentration	Printed on vial
Low Normal at 37°C	13 U/l
High Normal at 37°C	60 U/l
Linearity	250 U/l

ASSAY PROCEDURE :

	Calibrator	Sample
Reagent 1	1000 µl	1000 µl
Calibrator	10 µl	
Sample		10 µl

Mix and incubate for 60 second and then add

Reagent 2	200 µl	200 µl
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Mix and after 60 second incubation, measure the change in absorbance for 60 seconds at 37°C.

Determine the Δ Absorbance.

CALCULATION :

$$\text{Lipase Activity (U/l)} = \frac{\Delta \text{ Abs. of Sample}}{\Delta \text{ Abs. of Calibrator}} \times \text{Conc. of Calibrator}$$

LINEARITY :

Reagent is Linear up to 250 U/l.

Dilute the sample appropriately and re-assay if Lipase Activity exceeds 250 U/l.

REFERENCE NORMAL VALUE :

Serum Lipase activity 13-60 U/l

It is recommended that each laboratory should assign its own normal range.

QUALITY CONTROL :

For accuracy it is necessary to run known controls with every assay.

LIMITATION & PRECAUTIONS :

1. Storage conditions as mentioned on the kit to be adhered.
2. Do not freeze or expose the reagents to higher temperature as it may affect the performance of the kit.
3. Before the assay bring all the reagents to room temperature.
4. Avoid contamination of the reagent during assay process.
5. Use clean glassware free from dust or debris.

BIBLIOGRAPHY :

1. McNeely M. Lipase. Kaplan A et al. Clin Chem The C.V. Mosby Co St Louis. Toronto. Princeton 1984; 1130-1134, 892.
2. Neumann U et al. Comptes Rend. 4 colloque de Pont-a-Musson, Masson 627-634 (1979)
3. Junge W et al. J.Clin.Chem.Clin.Biochem., 21 445-451 (1983).
4. Neumann U et al. Methods of Enzymatics Analysis, 3rd ed. Vol.4, 26-34 (1984)
5. Young DS. Effects of drugs on Clinical Lab. Tests, 4th ed AACC Press, 1995.
6. Young DS. Effects of disease on Clinical Lab. Tests, 4th ed AACC 2001.
7. Burtis A et al. Tietz Textbook of Clinical Chemistry, 3rd ed AACC 1999.
8. Tietz N W et al. Clinical Guide to Laboratory Tests, 3rd ed AACC 1995.



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