台塑生醫科技股份有限公司
FORMOSA BIOMEDICAL TECHNOLOGY CORP.

γ-GLUTAMYL TRANSFERASE(GGT)-Kinetic Method GGT

FOR BECKMAN CX AND LX SYSTEMS

INTENDED USE

For the quantitative determination ofγ-glutamyl transferase activity in serum

CLINICAL SIGNIFICANCE

γ-glutamyl transferase (γ-GT) is a membrane-localized enzymes that catalyzes the transfer of aγ-glutamyl group from aγ-glutamylpeptide to another peptide or an amino acid. Kidney, pancreas and liver are rich inγ-GT.

Serumγ-GT is generally elevated as a result of liver disease. Cholestasis caused by alcohol or drug ingestion, mechanical or viral cholestasis, liver metastases are all resulted in the increase of γ-GT activity. In bone disorders in which alkaline phosphatase is elevated but γ-GT is normal; and in skeletal muscle disorder in which the AST is elevated but γ-GT is normal.

PRINCIPLE

$$\text{L-γ-glutamyl-p-nitroanilide} + \text{glycylglycine} \xrightarrow{\gamma\text{-GT}} \text{γ-glutamyl glycylglycine} + \text{p-nitroaniline}$$

SPECIMEN COLLECTION AND PREPARATION

Serum or lithium heparized plasma is the choice. EDTA and citrate do not interfere with analysis.

Serumγ-GT values are stable at room temperature or 4℃ for at least 7 days and are stable for at least 2 months when frozen.

REAGENT

- ·Each kit contains 2 cartridge of γ-GT reagent (2×200 tests).
- ·Ready to use.
- ·Components: L-γ-glutamyl-nitroanilide 4.4 mM;

STORAGE: Store all the above reagent at 2~8℃.

PRECAUTIONS:

1. For in vitro diagnostic use only.
2. Since all specimens are potentially infectious, they should be handled with appropriate precautions and practices in accordance with Biosafety level 2 as recommended by USA NIH manual Biosafety in Microbiological and Biomedical Laboratories, and in accordance with National or local regulations related to the safety precautions of such materials.
3. Each laboratory has to perform the quality control test to assure the results being reliable before running the specimen tests

PROCEDURES: Use bar code reading to follow the Beckman CX4 and LX-20 parameters and procedures.

EXPECTED VALUE:

Male: 8~37 u/l; Female: 5~31 u/l.

NOTE: It is generally recommended that each laboratory establish its own range of normal valus for commonly performed tests.

REFERENCES:

1. Rosalki S.B., Gamma-glutamyl transferase, Adv. Clin. Chem. 17:53-107,1975.
2. Orlowski, M., AND Meister, A., γ-glutamyl-p-nitroanilide: a new convenient substrate for determination and study of L-and D-γ-glutamyl transpeptidase activities, Biochemical Biophys. Acta 73:679-681,1963.
3. Szasz G., A kinetic photometric method for serumγ-glutamyl transpeptidase, Clinic. Chem. 15:124-136,1969.
4. Szasz G.: Reaction rate method forγ-glutamyltransferase activity in serum. Clinical Chem.22:2051-2055.1976.