ESTROM CK -MB (Kinatic Method)

ANGSTROM BIOTECH PVT. LTD

This reagent kit is for quantitative estimation of Creatinine Kinase activity in serum.

PRINCIPLE:

The principle is based on phenomenon of immunoinhibition whereby antibody developed against CK-M monomer renders CK-MM activity and inhibits activity of CK-MB by 50%. The CK method is used to estimate CK-B activity quantitatively, then CK-MB activity is obtained by multiply CK-B activity by two.

Creatinine Phosphate + ADP **Creatinine Kinase** Creatinine + ATP

ATP + Glucose **Hexokinase** G-6-P + ADP

Glucose-6-Phosphate + NADP + **Glucose-6-Phosphate DH**

6-Phosphogluconate + NADPH + H

CLINICAL SIGNIFICANCE:

The CK-MB activity is characteristic parameter in follow up of myocardial infarction. CK-MB activity increases after cell break down in myocardial infarction. Within 6 hours, increase is seen, that reaches to peak at 24 hours and comes back to normal levels in 2-3 days following myocardial infarction. Elevated level of CK-MB seen is myocarditis, Duchennes, muscular dystrophy, polymyostics, Reye's syndrome and carbon monoxide poisoning.

SPECIMEN COLLECTION AND STORAGE

- Serum sample is preferred.
- Enzyme activity in serum is unstable and rapidly lost during storage.

REAGENTS

All the reagents are to be stored at 2^0-8^0 C.

	No. of bottles	
	5x 10 ml	**25 ml**
Reagent 1 (Buffer)	4 (1x8 ml)	2 (10 ml)
Reagent 2 (Enzyme)	1 (1x2 ml)	1 (5 ml)

PRECAUTION

- CK-MB reagent is for In Vitro diagnostic use only.

REAGENT RECONSTITUTION:

Prepare the working reagent as per the need of the laboratory in the following proportion:

Reagent 1 0.4 ml
Reagent 2 0.1 ml

Mix gently. Keep for 5 minutes before use. Reconstituted reagent may be stored at 2^0-8^0 C, protected from light when not in use.

REAGENT STORAGE AND STABILITY:

All the reagents are stable upto expiry date stated on the label. Working reagent when stored at **2^0-8^0 C** in a dark coloured bottle is stable for 5 days.

GENERAL INSTRUMENT PARAMETERS

Reaction Type	: Kinetic
Slope of Reaction	: Increasing
Wavelength	: 340 nm
Flowcell Temperature	: 37^0 C
Reagent Volume	: 1.0 ml
Sample Volume	: 50 µl (0.05ml)
Delay Time	: 300 seconds
Interval	: 30 seconds
No. of readings	: 3
Factor	: 6752
Units	: IU/L
Zero Setting	: Distilled water
Path length	: 1.0 cm

PROCEDURE

Allow the reagent to attain 37^0 C prior to use.

Dispense into test tubes	Test
Working Reagent	1.0 ml
Sample	50 µl

Mix and incubate at 37^0 C for 5 minutes. Aspirate, read absorbance of test at 300 seconds and these after second and third reading at an interval of 30 seconds at 340 nm. Obtain the mean change in absorbance per minute (ΔA/min)

LINEARITY

This method is linear for CK-MB activity upto 1000 IU/L. For sample values exceeding the linearity limit, dilute the sample suitably with normal saline and repeat the assay. Apply proper dilution factor while calculation.

CALCULATION

Concentration of CK-MB in sample (IU/L) : ΔA?/min. x Factor
Factor = 6752

REFERENCE VALUES

0 – 25 IU/L at 37^0 C.

It is recommended that each laboratory establish its own reference values.

BIBLIGRAPHY

- TIETZ N., (ed). Fundamentals of Clinical Chemistry. W.B. Saunders Co., Philadelphia PA 1976.

Angstrom Biotech Pvt.Ltd.
G1 - 1035, RIICO Industrial Area
Phase - III, Bhiwadi,
Alwar, Rajasthan.
Pin Code - 301019
Email: info@angstrombiotech.in
Website: www.angstrombiotech.in.
Customer Care Number - 9599194831

⚠	Attention,see instructions for use		Consult Instructions For Use
IVD	For in vitro diagnostic use only	REF	Catalog #
2°C 8°C	Store between 2-8°C	LOT	Lot Number
	Do not use if package is damaged		Date of Manufacturing
	Manufacturer		Use by