PATHOZYME DIAGNOSTICS

# LIQVIPATH CK MB

## (IMMUNOINHIBITION METHOD)

**CAT NO.: CML**

**Reagent kit for quantitative estimation of CK-MB in Serum or Plasma.**

### DIAGNOSTIC SIGNIFICANCE:

The effective use of only total CK as a sensitive indicator of acute myocardial infarction has been diminished because CK elevation also occur due to non-cardiac conditions.
The CK-MB activity increases characteristically after cell break-down in myocardial infarction. The increase approximately occurs within 6 hours, peaks at 34 hours and comes back to normal levels within 2-3 days following myocardial infarction.

### PRINCIPLE:

The procedure involves measurement of CK activity in the presence of an antibody to CK-M monomer. This antibody completely inhibits the activity of CK-MM and half of the activity of CK-MB while not affecting the B subunit activity of CKMB and CK-BB. Then we use the CK method to quantitatively determine CK-B activity. The CK-MB activity is obtained by multiplying the CK-B activity by two.

Creatine phosphate + ADP $\xrightarrow{CK}$ Creatine + ATP

ATP + D-Glucose $\xrightarrow{HK}$ G-6-P + ADP

G-6-P + NADP $\xrightarrow{G6PDH}$ D-Gluconate-6-phosphate + NADPH + $H^+$

**CK** = Creatine kinase **G-6-P** = D-Glucose-6-phosphate
**HK** = Hexokinase **G-6-PDH**=Glucose-6phosphateDehydrogenase

### SPECIMEN COLLECTION:

Serum free of hemolysis. Heparinized or EDTA plasma.

### KIT PRESENTATION:

| PACK SIZE | 2 X 10 ml | 2 X 20 ml |
|---|---|---|
| R1 - CK MB (Enzyme Reagent) | 2 X 8 ml | 2 X 16 ml |
| R2 - CK MB (Starter Reagent) | 2 X 2 ml | 2 X 04 ml |

### WORKING REAGENT PREPARATION:

Mixing 4 volumes of R1-CK MB (Enzyme Reagent) with 1 volume of R2-CK MB (Starter Reagent). i.e. 800 µl R1 + 200 µl R2.
The working reagent is stable for **30** days at 2-8°C.

### REAGENT STORAGE AND STABILITY:

CK-MB reagents are stable at 2-8°C until the expiry date stated on the label.

### ASSAY PARAMETERS:

| | | | |
|---|---|---|---|
| Reaction | : Kinetic | Sample Volume | : 50 µl |
| Wavelength | : 340 nm | R1 + R2 Volume | : 800 µl + 200 µl |
| Flow Cell Temp. | : 37°C | Factor | : 6666 |
| Initial Delay | : 300 Sec | Reaction Slope | : Increasing |
| Read Time | : 180 Sec | Zero Setting | : Dist. Water |
| No. of Reading | : 03 | Linearity | : 1500 IU/L |

### PROCEDURE:

| Addition Sequence | Test |
|---|---|
| R1 - CK MB (Enzyme Reagent) | 800 µl |
| Sample (Test) | 50 µl |
| Mix well & incubate for 5 minutes at 37°C and add | |
| R2 - CK MB (Starter Reagent) | 200 µl |

Mix & aspirate immediately and read **first** absorbance of test exactly at 300 seconds and then, **second, third** and **fourth** at an interval of 60 seconds at 340 nm. Determine the mean change in absorbance per minute. (ΔA/min) and calculate the test results.

### CALCULATION

CK MB Activity (IU/L) = ΔA/min X 6666

### NORMAL VALUES:

0 - 25 IU/L
Each laboratory should establish its own normal range.

### LINEARITY:

This method is linear up to **1500 IU/L**. For values above 1500 IU/L, dilute the sample suitably with 0.9 % saline, and repeat the assay. Apply correction due to dilution to arrive at a final result.

### REFERENCES:


1. Lott J.A., Clin Lab Med., 6:546 (1986)
2. Young, D.S. Effects of drugs on clinical laboratory tests, AACC Press Washington, PP 120-122 (1990)
3. Ljungdahl I, Gerhardt W., Clin Chem 24:832 (1978)
4. Burtis, C.A. and E.R. Ashwood, Tietz, Text book of Clin Chem, 2nd Ed., W.B. saunders Co., Philadelphia P:562 (1994).



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Expiry Date | IVD In-Vitro Diagnostics Use | Storage | Mfg. Date | LOT Batch Number | REF Catalogue Number | See Package Insert


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