Description: CK is an enzyme found in various tissues, including the heart. CK-MB is a specific isoenzyme associated with cardiac tissue.
Timing: CK levels rise within 4-6 hours after a heart injury and can remain elevated for 2-3 days.
Clinical Use: While useful, CK is less specific than troponins since it can increase due to other conditions.

Creatine kinase (CK) plays a pivotal role in regulating cellular energy balance and is found throughout various tissues in the body. It catalyzes the reversible conversion of creatine and adenosine triphosphate into creatine phosphate and adenosine diphosphate, which is crucial for tissues that have high energy requirements.[1,2,3] CK is categorized into three primary isoenzymes: creatine kinase type M (CK-MM), creatine kinase type B (CK-BB), and creatine kinase type M and B (CK-MB).[4,5] Furthermore, two additional forms of CK, mitochondrial creatine kinase (Mt-CK) and macro creatine kinase (macro-CK), have also been identified in vivo. CK-MB is predominantly used in the diagnosis of myocardial damage. An increase in serum CK-MB activity levels is observed when myocardial cells sustain injury. The immunoinhibition method is the most frequently employed technique for measuring CK-MB levels.[6,7,8] However, the accuracy of immunosuppressive assays for CK-MB activity may be affected by the presence of other CK isoenzymes in the serum. In instances where CK-BB or macro-CK is detected in the serum of patients with tumors, elevated CK-MB activity may be reported even in the absence of myocardial injury.[9,10] In cases where there is a substantial presence of CK-BB and macro-CK, it is possible to observe abnormal results indicating that CK-MB levels surpass the total CK ratio (CK-MB > CK).[11]

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