

Human Recombinant CKMM (Creatine Kinase, MM isoform) in Laemmli Buffer

Catalog Number:	0999-W-CKMM
Product Specification:	CKMM (Creatine Kinase, MM isoform) from human skeletal muscle, is formulated in 1X Laemmli SDS-PAGE buffer with DTT. The sample is devoid of any enzymic activity
Size:	100 µl
Type:	Western blot control for Anti- Human CKMM Antibody
Specificity:	>95% pure. A 43 kDa band corresponding to Human CKMM can be visualized by probing the blot with a suitable anti-CKMM Antibody.
Species Cross-Reactivity:	Anti-Human CKMM Antibody (cat.# 0999-A1-CKMM)
Western Blot:	Heat the sample at 70 °C for 1 minute and load 10 ul/lane on SDS-PAGE gels.
Storage:	-20°C in aliquots. Freeze-thaw cycles must be avoided once the stock aliquot is diluted.
Form:	Liquid
Secondary Antibody (Recommended):	NA

Product Background:

Creatine kinase, often abbreviated CK and previously known as creatine phosphokinase or CPK, is a member of the ATP:guanido phosphotransferase protein family. The enzyme reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate)



The creatine kinase isozymes are involved in maintaining intracellular ATP levels, particularly in tissues with large, fluctuating energy demands, such as skeletal Muscle, heart, brain, and spermatozoa. Creatine kinase exists as a dimer of identical or non-identical chains. The muscle enzyme (MM) consists of 2 identical M subunits and is the major form in skeletal muscle, striated muscle and myocardium. The BB isoform consists of 2 identical B subunits and is found mainly in brain but also in other tissues like smooth muscle and nerve. Some tissues show a third, hybrid MB isoenzyme.

CKMM (EC 2.7.3.2) is a cytosolic creatine kinase isoform composed of two M chains and is an important serum marker for myocardial infarction. It acts as a homodimer in striated muscle as well as in other tissues, and as a heterodimer with a similar brain isozyme in heart. CKMM interacts in an

isoform-specific manner with the M-band of sarcomeric muscle, where it serves as an efficient intramyofibrillar ATP-regenerating system for the actin-activated myosin ATPase located nearby on both sides of the M-band. The M chain (MW = 43 kDa, SDS-PAGE) is 381 amino acids long in mouse, rat and human and encoded by CKM gene. The CKM gene has been mapped on chromosomes 7 (mouse), 1 (rat) and 19 (human).

References: (1) Li, H (2000) PNAS 97, 3467; Hamburg R (1990) JBC 265(11):6403; Benfield, PA (1984) JBC, 259, 14979.

Related Products:

0999-A1-CKMM	Creatine Kinase, MM isozyme: Antibody (Goat Polyclonal) Affinity Pure
1010-DG-HR	Donkey Anti-Goat IgG-HRP (Secondary Antibody)

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