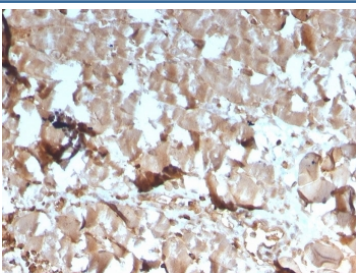


Creatine Kinase M Antibody / Muscle Energy Metabolism Marker Antibody [clone CKMM/3341] (V8504)

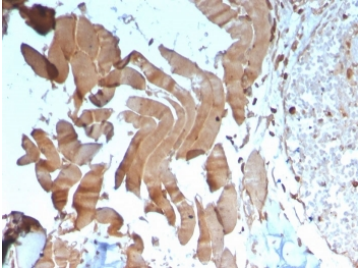
Catalog No.	Formulation	Size
V8504-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8504-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8504SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

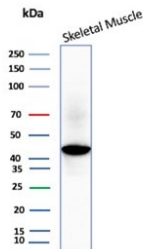
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	CKMM/3341
Purity	Protein G affinity chromatography
UniProt	P06732
Localization	Cytoplasm
Applications	Western Blot : 2-4ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Creatine Kinase M Antibody / Muscle Energy Metabolism Marker Antibody is available for research use only.



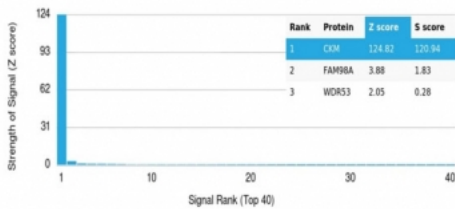
Creatine Kinase M Antibody Skeletal Muscle IHC. Immunohistochemistry analysis of FFPE human skeletal muscle tissue using Creatine Kinase M antibody. The mouse monoclonal antibody clone CKMM/3341 shows strong, diffuse cytoplasmic staining in skeletal myocytes, consistent with Creatine kinase M / CKM expression as a muscle energy metabolism marker. Myofiber cytoplasm displays robust signal reflecting high ATP demand associated with contractile activity, while non-muscle elements show minimal staining. HIER: boil tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling prior to staining.



Creatine Kinase M Antibody Human Skeletal Muscle Tissue IHC. Immunohistochemistry staining of FFPE human skeletal muscle tissue with Creatine Kinase M antibody (clone CKMM/3341). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Creatine Kinase M Antibody Skeletal Muscle WB. Western blot analysis of human skeletal muscle tissue lysate using Creatine Kinase M antibody. The mouse monoclonal antibody clone CKMM/3341 detects a band at approximately 43 kDa, consistent with the predicted molecular weight of Creatine kinase M / CKM. Strong signal in skeletal muscle reflects the high ATP demand of contractile tissue, supporting its role as a muscle energy metabolism marker.



Creatine Kinase M Antibody Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Creatine Kinase M antibody (clone CKMM/3341). These results demonstrate the foremost specificity of the CKMM/3341 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.

Description

Creatine kinase M (CKM) is a cytosolic enzyme that plays a central role in cellular energy homeostasis by catalyzing the reversible transfer of phosphate between phosphocreatine and ADP to regenerate ATP. This reaction is essential in tissues with high and fluctuating energy demands, particularly skeletal and cardiac muscle where rapid ATP turnover is required for contraction and mechanical work. Creatine Kinase M Antibody is commonly used to study this enzyme in muscle tissue, where it serves as a key marker of energy metabolism and contractile activity.

CKM belongs to the creatine kinase family of phosphotransferases, which includes multiple cytosolic and mitochondrial isoforms that collectively regulate intracellular energy distribution. The M-type subunit forms homodimers (CK-MM) that are highly enriched in skeletal muscle, as well as heterodimers (CK-MB) in cardiac tissue when combined with the B-type subunit. CKM antibody, also known as Creatine kinase M antibody or Muscle creatine kinase antibody in the literature, supports detection of this isoform in pathways associated with ATP regeneration, phosphocreatine cycling, and muscle-specific metabolic function.

Functionally, CKM operates within the phosphocreatine shuttle, a system that rapidly delivers high-energy phosphate groups from sites of ATP production to sites of ATP consumption. In muscle cells, this process is critical for sustaining repeated contraction cycles, maintaining ion gradients, and supporting cytoskeletal dynamics during mechanical stress. Alterations in CKM expression or activity have been associated with muscle injury, metabolic disorders, and cardiac dysfunction, making it a widely studied marker in both physiological and pathological contexts. Creatine Kinase M Antibody enables investigation of these changes at the protein level in tissue and lysate-based analyses.

Subcellularly, CKM is primarily localized in the cytoplasm of muscle cells, where it is often associated with myofibrillar

structures and regions of high ATP utilization. This localization supports efficient energy transfer during contraction and contributes to characteristic cytoplasmic staining patterns in tissue-based assays. In skeletal muscle, strong and uniform expression is typically observed in myocytes, while in cardiac tissue expression reflects the metabolic demands of continuous contraction. CKM antibody is therefore well suited for evaluating muscle-specific protein expression and metabolic activity.

This Creatine Kinase M Antibody is supported by immunohistochemistry and western blot data demonstrating detection of CKM in relevant tissue samples. Protein microarray specificity validation confirms selective binding to CKM among a large panel of human proteins, providing strong confidence in target specificity and reducing the likelihood of cross-reactivity. Together, these features support its use in studies of muscle metabolism, contractile function, and energy regulation.

This antibody is part of a [broader antibody panel](#) offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Creatine Kinase M Antibody / Muscle Energy Metabolism Marker Antibody should be determined by the researcher.

Immunogen

Recombinant full-length CKM protein was used as the immunogen for the Creatine Kinase M antibody.

Storage

Store the Creatine Kinase M antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CKM antibody, Creatine kinase M antibody, Muscle creatine kinase antibody, CK-MM antibody, Cytosolic creatine kinase M antibody