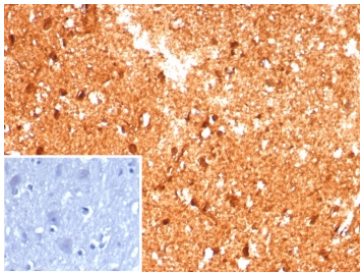
Creatine Phosphokinase BB Antibody / CK-BB Isoenzyme Antibody [clone CKBB/8609R] (V4386)

Catalog No.	Formulation	Size
V4386-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4386-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4386SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

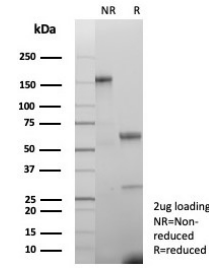
Recombinant RABBIT MONOCLONAL

Bulk quote request

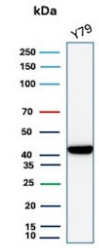
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Hamster, Guinea pig
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	CKBB/8609R
Purity	Protein A/G affinity
UniProt	P12277
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This Creatine Phosphokinase BB Antibody / CK-BB Isoenzyme Antibody is available for research use only.



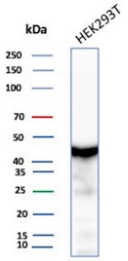
Creatine Phosphokinase BB Antibody Human Brain IHC. Immunohistochemistry analysis of FFPE human brain tissue using Creatine Phosphokinase BB antibody. The recombinant rabbit monoclonal antibody clone CKBB/8609R shows strong cytoplasmic staining in neurons, consistent with Creatine kinase B / CKB expression as the CK-BB isoenzyme. Neuronal cell bodies and processes display robust signal, highlighting the CK-BB isoform distribution in metabolically active brain tissue, while surrounding non-neuronal elements show comparatively lower staining. A PBS-only control confirms minimal non-specific staining. HIER: boil tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling prior to staining.



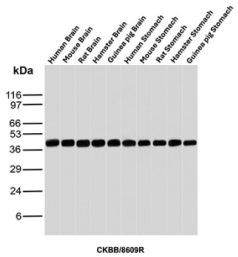
SDS-PAGE analysis of purified, BSA-free Creatine phosphokinase BB antibody (clone CKBB/8609R) as confirmation of integrity and purity.



Creatine Phosphokinase BB Antibody Y79 Cell WB. Western blot testing of human Y79 cell lysate with Creatine phosphokinase BB antibody (clone CKBB/8609R). Predicted molecular weight ~43 kDa.



Creatine Phosphokinase BB Antibody HEK293 Cell WB. Western blot testing of human HEK293 cell lysate with Creatine phosphokinase BB antibody (clone CKBB/8609R). Predicted molecular weight ~43 kDa.



Creatine Phosphokinase BB Antibody Human Mouse Rat Hamster Guinea Pig Brain and Stomach WB. Western blot analysis of human brain, mouse brain, rat brain, hamster brain, guinea pig brain, human stomach, mouse stomach, rat stomach, hamster stomach, and guinea pig stomach tissue lysates using Creatine Phosphokinase BB antibody. The recombinant rabbit monoclonal antibody clone CKBB/8609R detects a band at approximately 43 kDa, consistent with the predicted molecular weight of Creatine kinase B / CKB. The consistent banding across species and tissues supports detection of the CK-BB isoenzyme, highlighting its conserved expression profile and enabling isoenzyme-focused analysis in western blot studies.

Description

Creatine kinase B (CKB), also historically referred to as creatine phosphokinase BB (CK-BB), is a cytosolic enzyme that plays a central role in cellular energy homeostasis by catalyzing the reversible transfer of phosphate groups between phosphocreatine and ADP. This reaction is essential for maintaining ATP levels in tissues with high and fluctuating energy demands, particularly in the brain and other non-muscle tissues. Creatine Phosphokinase BB Antibody is commonly used to study this enzyme under its classical biochemical designation, particularly in contexts where isoenzyme identity and function are emphasized.

CKB belongs to the creatine kinase family, which includes multiple isoenzymes that differ in tissue distribution and functional roles. The BB isoform (CK-BB) forms homodimers composed of two B subunits and is highly enriched in neuronal and epithelial tissues, distinguishing it from muscle-type CKM and mitochondrial creatine kinases. CKB antibody, also known as Creatine kinase B antibody or CK-BB antibody in the literature, supports detection of this specific isoenzyme in studies aimed at differentiating metabolic pathways across tissue types and experimental systems.

Functionally, CK-BB operates within the phosphocreatine energy shuttle, a system that rapidly regenerates ATP at sites of high demand. In neuronal cells, this system supports synaptic transmission, ion transport, and cytoskeletal remodeling

by ensuring a continuous supply of energy. The BB isoenzyme is particularly relevant in studies of brain metabolism, cancer biology, and cellular stress responses, where metabolic reprogramming may alter isoenzyme expression patterns. Creatine Phosphokinase BB Antibody provides a useful tool for investigating these processes with a focus on isoform-specific detection.

Subcellularly, CK-BB is localized primarily in the cytoplasm, where it associates with regions of active energy consumption. Its distribution supports efficient ATP buffering and contributes to consistent detection in both tissue-based and lysate-based assays. In immunohistochemistry, CK-BB expression is typically observed as cytoplasmic staining in metabolically active cells, while in western blot analysis it produces a clear and reproducible band corresponding to the expected molecular weight of the enzyme.

This Creatine Phosphokinase BB Antibody is supported by immunohistochemistry and western blot data demonstrating detection of CK-BB in relevant tissue samples. Protein microarray specificity validation further confirms selective binding to CKB among a large panel of human proteins, providing strong confidence in isoenzyme specificity. Together, these features support its use in studies of creatine kinase isoenzyme biology, cellular energy metabolism, and tissue-specific metabolic regulation.

This Creatine Kinase B Antibody is part of a broader Creatine Kinase B antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Creatine Phosphokinase BB Antibody / CK-BB Isoenzyme Antibody should be determined by the researcher.

Immunogen

Recombinant human full-length protein was used as the immunogen for the Creatine phosphokinase BB antibody.

Storage

Aliquot the Creatine phosphokinase BB antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CKB antibody, Creatine kinase B antibody, Brain creatine kinase antibody, CK-BB antibody, Creatine kinase B chain antibody