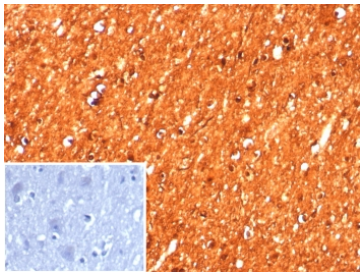
Creatine Kinase B Antibody / Neuronal Cytoplasmic Marker Antibody [clone CKBB/8608R] (V4377)

Catalog No.	Formulation	Size
V4377-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4377-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4377SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

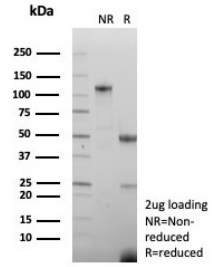
Recombinant RABBIT MONOCLONAL

Bulk quote request

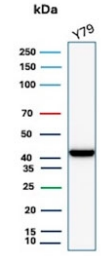
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Hamster, Guinea pig
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	CKBB/8608R
Purity	Protein A/G affinity
UniProt	P12277
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This Creatine Kinase B Antibody / Neuronal Cytoplasmic Marker Antibody is available for research use only.



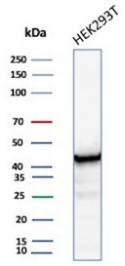
Creatine Kinase B Antibody Human Brain IHC. Immunohistochemistry analysis of FFPE human brain tissue using Creatine Kinase B antibody. The recombinant rabbit monoclonal antibody clone CKBB/8608R demonstrates strong, diffuse cytoplasmic staining in neurons, highlighting Creatine kinase B / CKB as a neuronal cytoplasmic marker. Neuronal cell bodies and processes show robust signal, while surrounding non-neuronal elements display comparatively lower staining, supporting its use in identifying metabolically active neuronal populations. 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.



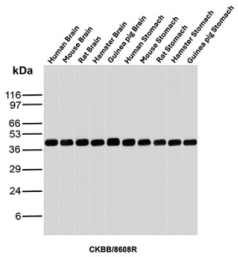
SDS-PAGE analysis of purified, BSA-free Creatine kinase B antibody (clone CKBB/8608R) as confirmation of integrity and purity.



Creatine Kinase B Antibody Y79 WB. Western blot analysis of human Y79 cell lysate using Creatine Kinase B antibody. The recombinant rabbit monoclonal antibody clone CKBB/8608R detects a band at approximately 43 kDa, consistent with the predicted molecular weight of Creatine kinase B / CKB. Detection in Y79 neuroblastoma-derived cells aligns with the known neuronal-associated expression of this cytosolic enzyme, supporting its use as a neuronal cytoplasmic marker in western blot analysis.



Western blot testing of human HEK293 cell lysate with Creatine kinase B antibody (clone CKBB/8608R). Predicted molecular weight ~43 kDa.



Creatine Kinase B 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 Kinase B antibody. The recombinant rabbit monoclonal antibody clone CKBB/8608R detects a band at approximately 43 kDa, consistent with the predicted molecular weight of Creatine kinase B / CKB. Strong and consistent detection in brain samples aligns with the known neuronal enrichment of this cytosolic enzyme, supporting its role as a neuronal cytoplasmic marker and confirming reliable cross-species performance in western blot analysis.

Description

Creatine kinase B (CKB) is a cytosolic enzyme responsible for maintaining intracellular ATP balance through reversible phosphate transfer between phosphocreatine and ADP. This reaction is essential in cells with high and fluctuating energy requirements, particularly neurons, where rapid ATP regeneration supports synaptic signaling and membrane excitability. Creatine Kinase B Antibody is widely used to evaluate cytoplasmic expression of this enzyme in studies of cellular metabolism and neuronal function.

CKB belongs to the creatine kinase family, which includes multiple isoforms that collectively regulate cellular energy distribution. The B-type subunit forms homodimers (CK-BB) enriched in brain and non-muscle tissues, distinguishing it from muscle-type CKM. CKB antibody, also known as Creatine kinase B antibody or Brain creatine kinase antibody in the literature, enables detection of this isoform in pathways associated with neuronal metabolism, ATP buffering, and phosphocreatine cycling. Its expression is especially prominent in neurons and glial cells, reflecting sustained metabolic demand in the central nervous system.

Functionally, CKB supports localized ATP regeneration by acting within the phosphocreatine shuttle, a system that rapidly transfers high-energy phosphate groups to sites of consumption. This buffering capacity is critical for maintaining ion

gradients, synaptic vesicle turnover, and cytoskeletal organization. Disruption of CKB activity has been linked to impaired neuronal function and altered metabolic states, underscoring its importance in cellular homeostasis. Creatine Kinase B Antibody provides a useful tool for studying these processes at the protein level in both normal and disease contexts.

Subcellularly, CKB is predominantly localized to the cytoplasm, where it is diffusely distributed but often enriched in regions of high metabolic activity. It may associate with cytoskeletal elements and membrane compartments to support localized ATP delivery. In tissue-based staining, this results in characteristic cytoplasmic signal within neurons, with relatively lower expression in surrounding stromal or non-neuronal cells. This cytoplasmic pattern makes CKB antibody particularly useful as a neuronal cytoplasmic marker in histological analysis of brain tissue.

This Creatine Kinase B Antibody is supported by immunohistochemistry data demonstrating clear cytoplasmic detection of CKB in human brain tissue, consistent with known neuronal expression patterns. In addition, protein microarray specificity validation confirms selective binding to CKB across a large panel of human proteins, providing strong confidence in target specificity. Together, these features support reliable use of this antibody in studies of neuronal metabolism, cytoplasmic protein distribution, and energy 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 Kinase B Antibody / Neuronal Cytoplasmic Marker Antibody should be determined by the researcher.

Immunogen

Recombinant human full-length protein was used as the immunogen for the Creatine kinase B antibody.

Storage

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

Alternate Names

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