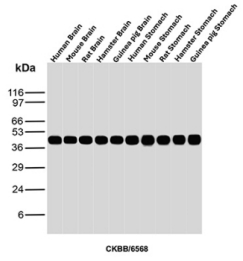
Brain Creatine Kinase Antibody / Neuronal Energy Homeostasis Marker [clone CKBB/6568] (V4371)

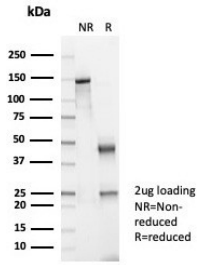
Catalog No.	Formulation	Size
V4371-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4371-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4371SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

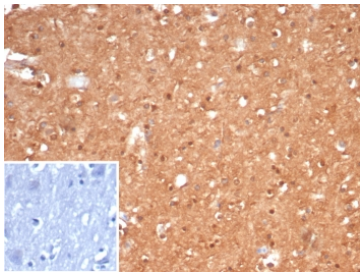
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Hamster, Guinea pig
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CKBB/6568
Purity	Protein A/G affinity
UniProt	P12277
Localization	Cytoplasm
Applications	ELISA (Order BSA-free format for coating) Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Brain Creatine Kinase Antibody / Neuronal Energy Homeostasis Marker is available for research use only.



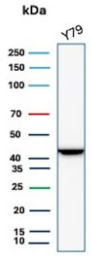
Brain Creatine Kinase Antibody Multi-Species WB. Western blot analysis of human brain, mouse brain, rat brain, hamster brain, guinea pig brain, human stomach, mouse stomach, rat stomach, hamster stomach, and guinea pig stomach tissue lysates using Brain Creatine Kinase antibody. The mouse monoclonal antibody clone CKBB/6568 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 energy homeostasis function of this cytosolic enzyme, while cross-species banding supports its conserved role in ATP buffering across diverse tissues.



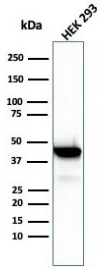
SDS-PAGE analysis of purified, BSA-free Brain Creatine Kinase antibody (clone CKBB/6568) as confirmation of integrity and purity.



Brain Creatine Kinase Antibody Human Brain IHC. Immunohistochemistry analysis of FFPE human brain tissue using Brain Creatine Kinase antibody. The mouse monoclonal antibody clone CKBB/6568 shows diffuse cytoplasmic staining in neurons, consistent with Creatine kinase B / CKB expression supporting neuronal energy homeostasis. Neuronal cell bodies and processes display moderate to strong signal, while background staining remains low. 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.



Brain Creatine Kinase Antibody Y79 WB. Western blot analysis of human Y79 cell lysate using Brain Creatine Kinase antibody. The mouse monoclonal antibody clone CKBB/6568 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 neuronal lineage and energy homeostasis function of this cytosolic enzyme, supporting its use as a neuronal energy homeostasis marker in western blot analysis.



Brain Creatine Kinase Antibody HEK293 Cell WB. Western blot testing of human HEK293 cell lysate with Brain Creatine Kinase antibody (clone CKBB/6568). Predicted molecular weight ~43 kDa.

Description

Creatine kinase B (CKB) is a cytosolic enzyme that plays a central role in maintaining energy homeostasis in the central nervous system by catalyzing the reversible transfer of phosphate between phosphocreatine and ADP to generate ATP. This reaction is critical in neurons, where rapid and localized ATP regeneration is required to sustain synaptic transmission, ion gradient maintenance, and cellular signaling. Brain Creatine Kinase Antibody is commonly used to evaluate expression of this enzyme in neural tissue, where its abundance reflects the high metabolic demands of the brain. This Creatine Kinase B Western Blot Antibody is part of a broader Creatine Kinase B antibody for WB panel offered by NSJ Bioreagents.

CKB is a member of the creatine kinase family, which includes both cytosolic and mitochondrial isoforms that function together to regulate intracellular energy distribution. The B-type subunit forms homodimers (CK-BB) that are highly enriched in brain tissue and other non-muscle cell types. CKB antibody, also referred to as Creatine kinase B antibody or Brain creatine kinase antibody in the literature, supports detection of this isoform in studies focused on neuronal metabolism, brain-specific protein expression, and tissue-level energy regulation.

Functionally, CKB operates within the phosphocreatine shuttle, a system that rapidly transports high-energy phosphate groups to sites of ATP consumption. In neurons, this mechanism is essential for maintaining synaptic vesicle cycling,

neurotransmitter release, and restoration of ion gradients following depolarization. Alterations in CKB expression or activity have been associated with neurological conditions such as neurodegenerative disease, ischemic injury, and metabolic dysfunction, making it a relevant marker in studies of brain pathology. Brain Creatine Kinase Antibody provides a useful tool for examining these changes at the protein level in tissue-based analyses.

Subcellularly, CKB is primarily localized in the cytoplasm but is often enriched in neuronal processes and synaptic regions where energy demand is greatest. Its association with cytoskeletal elements and membrane structures supports efficient ATP delivery to localized sites of consumption. In immunohistochemistry, this distribution is reflected as cytoplasmic staining within neuronal cell bodies and processes, with stronger signal typically observed in metabolically active regions of the brain. CKB antibody is therefore well suited for evaluating spatial expression patterns in neural tissues.

This Brain Creatine Kinase Antibody is supported by immunohistochemistry data demonstrating clear detection of CKB protein in human brain tissue, consistent with known expression patterns. In addition, protein microarray specificity validation confirms selective binding to CKB among a large panel of human proteins, providing confidence in target specificity. Together, these features support reliable detection of creatine kinase B in studies of neuronal metabolism, brain physiology, and tissue-specific 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 Brain Creatine Kinase Antibody / Neuronal Energy Homeostasis Marker should be determined by the researcher.

Immunogen

Recombinant human full-length protein was used as the immunogen for the Brain Creatine Kinase antibody.

Storage

Aliquot the Brain Creatine Kinase 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, Cytosolic creatine kinase B antibody

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