

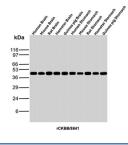
Recombinant Creatine kinase B Antibody / CKB / Brain Creatine Kinase [clone rCKBB/8841] (V4373)

Catalog No.	Formulation	Size
V4373-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4373-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4373SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

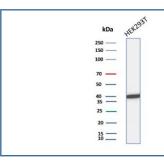
Recombinant MOUSE MONOCLONAL

Bulk quote request

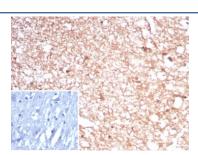
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Hamster, Guinea pig
Format	Purified
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rCKBB/8841
Purity	Protein A/G affinity
UniProt	P12277
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This recombinant Creatine kinase B antibody is available for research use only.



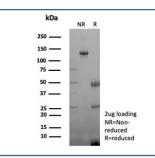
Western blot analysis of Human Brain, Mouse Brain, Rat Brain, Hamster Brain, Guinea pig Brain, Human Stomach, Mouse Stomach, Rat Stomach, Hamster Stomach and Guinea pig Stomach tissue lysates using recombinant Creatine kinase B antibody (clone rCKBB/8841). Predicted molecular weight ~43 kDa.



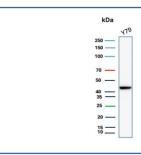
Western blot testing of human HEK293 cell lysate with recombinant Creatine kinase B antibody. Predicted molecular weight ~43 kDa.



IHC staining of FFPE human brain tissue with recombinant Creatine kinase B antibody (clone rCKBB/8841). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free recombinant Creatine kinase B antibody (clone rCKBB/8841) as confirmation of integrity and purity.



Western blot testing of human Y79 cell lysate with recombinant Creatine kinase B antibody. Predicted molecular weight ~43 kDa.

Description

Recombinant Creatine kinase B antibody detects Creatine kinase B-type, also known as CKB or brain-type creatine kinase, an ATP-regenerating enzyme that maintains energy stability in cells with high metabolic demand. The UniProt recommended name is Creatine kinase B-type (CKB). This cytosolic phosphotransferase catalyzes the reversible conversion of creatine and ATP into phosphocreatine and ADP, forming a critical energy buffer system in neurons and other active tissues.

Functionally, Recombinant Creatine kinase B antibody identifies a 43 kDa homodimeric enzyme responsible for distributing energy between cellular compartments. CKB partners with mitochondrial creatine kinases to shuttle phosphate groups from sites of ATP generation to regions of consumption such as Na+/K+-ATPase pumps, synaptic vesicles, and cytoskeletal complexes. By maintaining localized ATP supply, CKB supports neurotransmission, vesicle recycling, and ion transport during continuous neuronal signaling. Its rapid reaction kinetics make it an essential metabolic stabilizer in brain tissue.

The CKB gene is located on chromosome 14q32.33 and encodes a 381-amino acid cytosolic enzyme conserved across vertebrates. CKB shares high structural similarity with the muscle isoform CKM but differs in its tissue distribution and regulatory behavior. Expression of CKB is enriched in brain, retina, and reproductive tissues, where it sustains ATP

turnover during peak activity. Elevated CKBB levels in serum or cerebrospinal fluid indicate neuronal injury or hypoxic stress, while aberrant CKB expression in tumors enhances glycolytic efficiency and resistance to energy deprivation.

Recombinant Creatine kinase B antibody is produced using recombinant expression technology for improved specificity, batch consistency, and purity compared to traditional polyclonal preparations. It is validated for use in western blotting, immunocytochemistry, and ELISA across human, mouse, and rat samples. CKB interacts with cytoskeletal and membrane proteins, anchoring energy regeneration near ATP-consuming enzymes. Disruption of Ckb expression in model organisms results in reduced phosphocreatine levels, impaired synaptic plasticity, and increased vulnerability to ischemic damage.

Beyond the nervous system, CKB functions in sperm motility, retinal photoreceptor activity, and smooth muscle contractility. It is regulated by phosphorylation, oxidation, and transcriptional control through CREB and NRF1 signaling. By ensuring consistent energy buffering, Recombinant Creatine kinase B antibody serves as a powerful tool for exploring neuronal metabolism, oxidative stress adaptation, and cancer bioenergetics. NSJ Bioreagents offers this recombinant antibody fully validated for metabolic, neurological, and oncological research applications.

Application Notes

Optimal dilution of the recombinant Creatine kinase B antibody should be determined by the researcher.

Immunogen

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

Storage

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