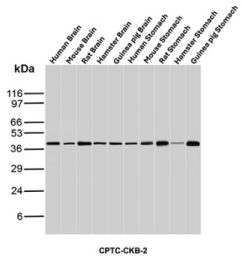
CKB Antibody for WB Multi-Species Clone CPTC-CKB-2 / Creatine Phosphokinase-BB [clone CPTC-CKB-2] (V7682)

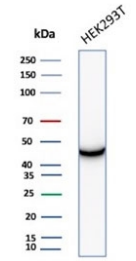
Catalog No.	Formulation	Size
V7682-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7682-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7682SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

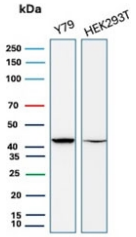
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CPTC-CKB-2
Purity	Protein G affinity chromatography
UniProt	P12277
Localization	Cytoplasmic
Applications	Western Blot : 2-4ug/ml
Limitations	This CKB Antibody for WB Multi-Species Clone CPTC-CKB-2 is available for research use only.



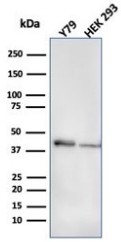
CKB Antibody for WB Multi-Species Clone CPTC-CKB-2. Western blot analysis of Human Brain, Mouse Brain, Rat Brain, Hamster Brain, Guinea pig Brain, Human Stomach, Mouse Stomach, Rat Stomach, Hamster Stomach and Guinea pig Stomach tissue lysates using Creatine kinase B antibody (clone CPTC-CKB-2). Predicted molecular weight ~43 kDa.



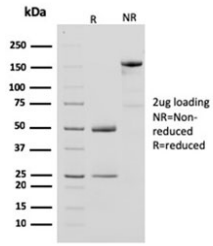
CKB Antibody for WB HEK293. Western blot testing of human HEK293 cell lysate with CKB antibody (clone CPTC-CKB-2). Predicted molecular weight ~43 kDa.



CKB Antibody for WB Y79 and HEK293. Western blot testing of human Y79 and HEK293 cell lysate with CKB antibody (clone CPTC-CKB-2). Predicted molecular weight ~43 kDa.



CKB Antibody for WB Y79 and HEK293 Cells. Western blot testing of human Y79 and HEK293 cell lysate with CKB antibody (clone CPTC-CKB-2). Predicted molecular weight ~43 kDa.



SDS-PAGE analysis of purified, BSA-free CKB antibody (clone CPTC-CKB-2) as confirmation of integrity and purity.

Description

Creatine kinase B (CKB) is a cytosolic enzyme that plays a fundamental role in cellular energy buffering by catalyzing the reversible conversion of phosphocreatine and ADP into ATP and creatine. This reaction is essential in tissues with high and fluctuating energy demands, including brain, epithelial, and proliferative cell systems where rapid ATP regeneration is required. CKB Antibody for WB is widely used to detect this enzyme in protein lysates, supporting comparative analysis of energy metabolism across multiple species and experimental models. This Creatine Kinase B Western Blot Antibody is part of a broader Creatine Kinase B antibody for WB panel offered by NSJ Bioreagents.

CKB belongs to the creatine kinase family of phosphotransferases, which includes cytosolic and mitochondrial isoforms that together maintain intracellular ATP homeostasis. The B-type subunit forms homodimers (CK-BB) or heterodimers with muscle-type CKM, enabling tissue-specific metabolic regulation. CKB antibody, also known as Creatine kinase B antibody or Brain creatine kinase antibody in the literature, supports selective detection of the B isoform, which is particularly important in studies distinguishing neuronal and non-muscle metabolic pathways from muscle-derived CK activity.

Functionally, CKB operates within the phosphocreatine shuttle, a rapid-response energy transfer system that distributes high-energy phosphate groups from mitochondria to sites of ATP consumption. This process supports essential cellular

functions including ion transport, cytoskeletal dynamics, and signal transduction. In western blot workflows, CKB serves as a robust metabolic marker whose expression can reflect changes in cellular energy state, proliferation status, or stress response. CKB Antibody for WB is therefore valuable for monitoring metabolic adaptations across diverse biological systems.

Subcellularly, CKB is predominantly localized in the cytoplasm but can associate with membrane structures and protein complexes that require localized ATP regeneration. This distribution contributes to consistent extraction into soluble protein fractions and reliable detection in western blot analysis. The proteinâ€™s relatively stable expression and clear electrophoretic behavior support reproducible band identification across different sample types and species, making it particularly suitable for cross-species lysate comparison studies.

This CKB Antibody for WB is supported by western blot data demonstrating detection of endogenous CKB protein across multiple species, enabling direct comparison of expression profiles in human and common model organisms. In addition, protein microarray specificity validation confirms highly selective binding to CKB among thousands of human proteins, providing strong confidence in specificity and minimizing off-target detection. Together, these validation approaches make this antibody a dependable reagent for multi-species western blot analysis in studies of energy metabolism, neuronal biology, and cellular physiology.

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

Application Notes

Optimal dilution of the CKB Antibody for WB Multi-Species Clone CPTC-CKB-2 should be determined by the researcher.

Immunogen

Recombinant human full-length protein was used as the immunogen for the CKB antibody.

Storage

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

Alternate Names

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