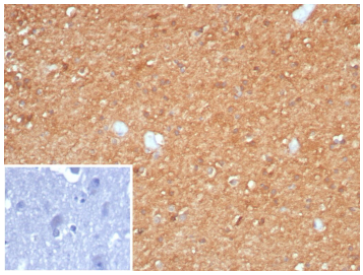
# CKB Antibody / Creatine kinase B-type [clone CKBB/8295R] (V5857)

| Catalog No. | Formulation | Size |
|---|---|---|
| V5857-100UG | 0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide | 100 ug |
| V5857-20UG | 0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide | 20 ug |
| V5857SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

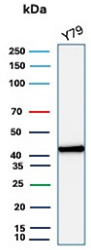
Recombinant RABBIT MONOCLONAL

**Bulk quote request**

| | |
|---|---|
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG, kappa |
| **Clone Name** | CKBB/8295R |
| **UniProt** | P12277 |
| **Localization** | Cytoplasm |
| **Applications** | Immunohistochemistry (FFPE) : 1-2ug/ml<br>Western Blot : 2-4ug/ml |
| **Limitations** | This CKB/Creatine kinase B-type antibody is available for research use only. |



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded human brain tissue using CKB antibody (clone CKBB/8295R). Diffuse cytoplasmic staining is observed throughout the neuropil, with signal present in neuronal cell bodies and surrounding parenchyma. Individual nuclei show minimal staining, and background signal in the section is low. Nuclei are counterstained in blue. Inset shows PBS substituted for the primary antibody as a secondary-only negative control. Heat-induced antigen retrieval was performed by heating tissue sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95oC, followed by cooling at room temperature for 20 minutes.




Western blot analysis of human Y79 cell lysate using CKB/Creatine kinase B-type antibody (clone CKBB/8295R). Predicted molecular weight ~43 kDa.

## Description

CKB antibody targets Creatine kinase B-type, a cytosolic enzyme encoded by the CKB gene that catalyzes the reversible transfer of a phosphate group between ATP and creatine, forming phosphocreatine and ADP. Creatine kinase B-type plays a central role in cellular energy homeostasis by buffering and rapidly regenerating ATP in cells with high and fluctuating energy demands. This enzyme represents the brain-type creatine kinase isoform and is widely expressed in neuronal tissues, glial cells, and other cell types with active energy metabolism. CKB antibody is therefore commonly applied in research focused on energy transfer systems, phosphagen metabolism, and cellular bioenergetics.

Creatine kinase B-type exists primarily as a homodimer but can also form heterodimers with the muscle-type creatine kinase subunit, giving rise to the CK-MB isoenzyme. The protein belongs to the creatine kinase family and contains conserved catalytic domains required for creatine and nucleotide binding. In addition to strong expression in the nervous system, CKB has been reported in epithelial tissues, endocrine organs, and proliferative cell populations, supporting its broader role in cellular metabolism beyond the brain. Clone CKBB/8295R is designed to recognize Creatine kinase B-type for research use in studies examining cellular energy dynamics and creatine kinase system regulation.

Altered expression of Creatine kinase B-type has been associated with neurological injury, neurodegenerative disease, and metabolic stress conditions. Changes in CKB levels have also been investigated in cancer biology, where shifts in cellular energy metabolism are a hallmark feature of tumor progression. Because the creatine kinase system is closely linked to ATP availability, redox balance, and cell survival, CKB remains an important research target in studies of neuronal health, metabolic adaptation, and disease-associated bioenergetic remodeling. Clone CKBB/8295R provides a tool for examining Creatine kinase B-type expression and distribution in experimental systems relevant to cellular metabolism and energy-dependent biological processes.

## Application Notes

1. Optimal dilution of the CKB/Creatine kinase B-type antibody should be determined by the researcher.

2. This CKB/Creatine kinase B-type antibody is recombinantly produced by expression in human HEK293 cells.

## Immunogen

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

## Storage

CKB/Creatine kinase B-type antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.