

Goat Anti-CKB / Brain Creatine Kinase Antibody Peptide-affinity purified goat antibody Catalog # AF1245a

## Specification

# Goat Anti-CKB / Brain Creatine Kinase Antibody - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Concentration Isotype Calculated MW WB, E <u>P12277</u> <u>NP\_001814</u>, <u>1152</u>, <u>12709 (mouse)</u> Human Mouse, Rat, Pig, Dog Goat Polyclonal 100ug/200ul IgG 42644

## Goat Anti-CKB / Brain Creatine Kinase Antibody - Additional Information

Gene ID 1152

**Other Names** Creatine kinase B-type, 2.7.3.2, B-CK, Creatine kinase B chain, CKB, CKBB

Dilution WB~~1:1000 E~~N/A

Format

0.5 mg lgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-CKB / Brain Creatine Kinase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Goat Anti-CKB / Brain Creatine Kinase Antibody - Protein Information

Name CKB (<u>HGNC:1991</u>)

Synonyms CKBB

Function



Reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate) (PubMed:<a href="http://www.uniprot.org/citations/8186255" target="\_blank">8186255</a>). Creatine kinase isoenzymes play a central role in energy transduction in tissues with large, fluctuating energy demands, such as skeletal muscle, heart, brain and spermatozoa (Probable). Acts as a key regulator of adaptive thermogenesis as part of the futile creatine cycle: localizes to the mitochondria of thermogenic fat cells and acts by mediating phosphorylation of creatine to initiate a futile cycle of creatine phosphorylation and dephosphorylation (By similarity). During the futile creatine cycle, creatine and N-phosphocreatine are in a futile cycle, which dissipates the high energy charge of N- phosphocreatine as heat without performing any mechanical or chemical work (By similarity).

## **Cellular Location**

Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q04447}. Mitochondrion {ECO:0000250|UniProtKB:Q04447}. Cell membrane. Note=Localizes to the mitochondria of thermogenic fat cells via the internal MTS-like signal (iMTS-L) region {ECO:0000250|UniProtKB:Q04447}

## Goat Anti-CKB / Brain Creatine Kinase Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

## Goat Anti-CKB / Brain Creatine Kinase Antibody - Images



AF1245a (0.1  $\mu$ g/ml) staining of human brain lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

## Goat Anti-CKB / Brain Creatine Kinase Antibody - Background

The protein encoded by this gene is a cytoplasmic enzyme involved in energy homeostasis. The encoded protein reversibly catalyzes the transfer of phosphate between ATP and various phosphogens such as creatine phosphate. It acts as a homodimer in brain as well as in other



tissues, and as a heterodimer with a similar muscle isozyme in heart. The encoded protein is a member of the ATP:guanido phosphotransferase protein family. A pseudogene of this gene has been characterized.

## Goat Anti-CKB / Brain Creatine Kinase Antibody - References

Reduced creatine kinase B activity in multiple sclerosis normal appearing white matter. Steen C, et al. PLoS One, 2010 May 25. PMID 20520825.

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Proteome analysis of schizophrenia patients Wernicke's area reveals an energy metabolism dysregulation. Martins-de-Souza D, et al. BMC Psychiatry, 2009 Apr 30. PMID 19405953. Prefrontal cortex shotgun proteome analysis reveals altered calcium homeostasis and immune

system imbalance in schizophrenia. Martins-de-Souza D, et al. Eur Arch Psychiatry Clin Neurosci, 2009 Apr. PMID 19165527.