

Human CKB / Creatine kinase B type Protein (His Tag)

Catalog Number: 14415-H07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

B-CK; BCK; CKBB; HEL-211; HEL-S-29

Protein Construction:

A DNA sequence encoding the human CKB (P12277)(Pro2-Lys381) was fused with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Kinase activity untested

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human CKB consists of 398 amino acids and has a calculated molecular mass of 44.8 kDa. The recombinant protein migrates as an approximately 45 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 50mM Tris, 100mM NaCl, 10% glycerol, pH 8.0.

Usage Guide

Storage:

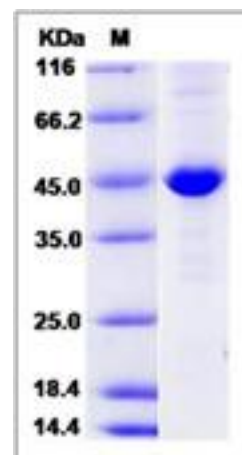
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CKB(Creatine kinase B type) contains 1 phosphagen kinase C-terminal domain and 1 phosphagen kinase N-terminal domain. It belongs to the ATP:guanido phosphotransferase family. CKB consists of a homodimer of two identical brain-type CK-B subunits. CKB is a cytoplasmic enzyme involved in cellular energy homeostasis, with certain fractions of the enzyme being bound to cell membranes, ATPases, and a variety of ATP-requiring enzymes in the cell. There, CKB forms tightly coupled microcompartments for in situ regeneration of ATP that has been used up. CKB reversibly catalyzes the transfer of "energy-rich" phosphate between ATP and creatine or between phospho-creatine (PCr) and ADP. Its functional entity is a homodimer in brain, smooth muscle as well as in other tissues and cells such as neuronal cells, retina, kidney, bone etc.

References

1.Wienker TF, *et al.* (1985) A dominant mutation causing ectopic expression of the creatine kinase B gene maps on chromosome 14. *Cytogenet Cell Genet.* 40:776. 2.Mariman EC, *et al.* (1989) Complete nucleotide sequence of the human creatine kinase B gene. *Nucleic Acids Res.* 17(15):6385. 3.Bong S, *et al.* (2008) Structural studies of human brain-type creatine kinase complexed with the ADP-Mg²⁺-NO₃⁻-creatine transition-state analogue complex. *FEBS Letters.* 582(28): 3959-65.

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