

## Product datasheet for **AM26243BT-N**

### **Creatine kinase B type (CKB) (N-term) Mouse Monoclonal Antibody [Clone ID: CK-BYK/21E10]**

#### **Product data:**

Product Type:	Primary Antibodies
Clone Name:	CK-BYK/21E10
Applications:	IF, IHC, WB
Recommended Dilution:	<b>Immunohistochemistry on frozen sections</b> (1): Fixed 2 hr in 2% paraformaldehyde and 0.1 % glutaraldehyde in 0.1 M PB; stored until use in 1 % paraformaldehyde; blocking with 1% normal swine serum (Ref 1). The typical starting working dilution is 1:50. <b>Immunohistochemistry on paraffin sections</b> (1): Antigen retrieval: 0.5 % pepsin in 0.01 N HCl for 15 min at 37 °C; endogenous peroxidase blocking by using 3 % H <sub>2</sub> O <sub>2</sub> in PBS for 30 min; blocking with 1% normal swine serum for 30 min.; Purkinje cells serve as positive control and connective tissue as negative control (Ref 1). The typical starting working dilution is 1:50. <b>Immunofluorescence</b> (1). <b>Western blot</b> (1-3): reduced, size ~43-46 kDa (Ref 1-2). The typical starting working dilution is 1:50. <b>Positive control:</b> Human Purkinje cells. <b>Negative control:</b> Human fibroblasts.
Reactivity:	Human, Mouse, Rabbit, Rat
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Synthetic 17-mer peptide corresponding to the N-terminal sequence of human creatine kinase brain-type
Specificity:	The monoclonal antibody CK-BYK/21E10 recognizes creatine kinase B-type, also known as CKB.
Formulation:	PBS Label: Biotin State: Liquid 0.2 µm filtered Ig fraction Stabilizer: 0.1% bovine serum albumin Preservative: 0.02% sodium azide



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<b>Concentration:</b>	lot specific
<b>Purification:</b>	Protein G
<b>Conjugation:</b>	Biotin
<b>Storage:</b>	Store at 2 - 8 °C.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>Gene Name:</b>	creatine kinase B
<b>Database Link:</b>	<a href="#">NP_001814.2</a> <a href="#">Entrez Gene 12709 Mouse</a> <a href="#">Entrez Gene 24264 Rat</a> <a href="#">Entrez Gene 1152 Human</a> <a href="#">P12277</a>
<b>Background:</b>	<p>Human CKB is a protein of 381 amino acids (~45 kDa), expressed in a number of tissues. CKB is most abundant in adult brain, approx. 5-fold lower in the stomach, 10-fold lower in the heart and barely detectable in liver. In brain, whereas most CK has been shown to be cytosolic, several of the reactions requiring CK are membrane-associated. CKB belongs to the creatine kinase (CK) isoenzymes that catalyse the synthesis of phosphocreatine (PCr) and its subsequent use in the regeneration of ATP in cell types where the consumption of ATP is rapid and/or sudden. In the brain the different CK isoforms constitute an energy shuttle wherein ATP produced in the mitochondria is used by a mitochondrial CK [e.g. ubiquitous mitochondrial creatine kinase (uMi-CK)] to generate PCr, which is then transported and used by a cytoplasmic CK [e.g. brain creatine kinase (CKB)] to regenerate ATP at discrete cellular sites of high ATP turnover. CKB appears to have a role in regenerating ATP needed for the transport of ions and neurotransmitters since CKB has been localized to brain synaptic plasma membranes, possibly coupled to Na<sup>+</sup>/K<sup>+</sup>-ATPase and acetylcholine receptor-rich membranes.</p> <p>Expression of CKB is developmentally controlled: in rat, brain CKB protein at birth is extremely low and increases 10-fold until week 4. This reflects the many energy-demanding processes in brain during brain development.</p>
<b>Synonyms:</b>	Creatine kinase B-type, Creatine kinase B chain, B-CK, Creatine kinase BB, CKB
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Arginine and proline metabolism, Metabolic pathways