

Datasheet for ABIN2191988
anti-CKB antibody



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Overview

Quantity:	100 µg
Target:	CKB
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CKB antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Clone:	CK-BYK-21E10
Isotype:	IgG2b
Cross-Reactivity (Details):	Cross reactivity: Rabbit : Yes, Mouse : Yes, Rat : Yes
Sterility:	0.2 µm filtered

Target Details

Target:	CKB
Alternative Name:	Creatine Kinase B-Type (CKB Products)
Background:	The monoclonal antibody CK-BYK/21E10 recognizes human creatine kinase B-type, also known as CKB. 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

Target Details

in the heart and barely detectable in liver. In brain, whereas most CKB has been shown to be cytosolic, several of the reactions requiring CKB 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⁺/K⁺-ATPase and acetylcholine receptor-rich membranes. 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. Aliases Creatine kinase B chain, B-CK, BB-CK Immunogen Synthetic 17-mer peptide corresponding to the N-terminal sequence of human creatine kinase brain- type (SNSHNALKLRFPAEDEF)

Application Details

Application Notes: For immunohistochemistry and Western blotting, dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. Positive Human Purkinje cells control
Negative Human fibroblasts control

Restrictions: For Research Use only

Handling

Buffer: PBS, containing 0.1 % bovine serum albumin and 0.02 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C

Storage Comment: Product should be stored at 4 °C. Under recommended storage conditions, product is stable for at least one year. The exact expiry date is indicated on the label.

Publications

- Product cited in:
- Sisttermans, de Kok, Peters, Ginsel, Jap, Wieringa: "Tissue- and cell-specific distribution of creatine kinase B: a new and highly specific monoclonal antibody for use in immunohistochemistry." in: **Cell and tissue research**, Vol. 280, Issue 2, pp. 435-46, (1995) ([PubMed](#)).
- de Kok, Geurds, Sisttermans, Usmany, Vlak, Wieringa: "Production of native creatine kinase B in insect cells using a baculovirus expression vector." in: **Molecular and cellular biochemistry**, Vol. 143, Issue 1, pp. 59-65, (1995) ([PubMed](#)).