

## CKAP1/TBCB Protein, Human (His)

Cat. No.:	HY-P77331
Synonyms:	Tubulin-folding cofactor B; Cytoskeleton-associated protein 1; TBCB; CG22; CKAP1
Species:	Human
Source:	E. coli
Accession:	Q99426 (M1-I244)
Gene ID:	1155
Molecular Weight:	33-37 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>The CKAP1/TBCB protein exhibits a multifaceted role in the tubulin folding pathway, binding to alpha-tubulin folding intermediates subsequent to their interaction with cytosolic chaperonin, a pivotal step in the transition from newly synthesized tubulin to properly folded heterodimer. It plays a crucial role in regulating tubulin heterodimer dissociation and may function as a negative regulator of axonal growth. The formation of a supercomplex composed of cofactors A to E is integral to its mechanism. Cofactors A and D function by capturing and stabilizing tubulin in a quasi-native conformation, while cofactor E binds to the cofactor D-tubulin complex. The subsequent interaction with cofactor C leads to the release of tubulin polypeptides committed to the native state. Additionally, cofactors B and E can form a heterodimer that binds to alpha-tubulin, enhancing their capacity to dissociate tubulin heterodimers. CKAP1/TBCB also interacts with GAN and DCTN1, further expanding its functional associations in cellular processes.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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