

Human Complexin-2 / CPLX2 Protein (His Tag)

Catalog Number: 11927-H07E



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

921-L; CPX-2; CPX2; Hfb1; 921-L; AI413745; AW492120

Protein Construction:

A DNA sequence encoding the human CPLX2 (Q6PUV4-1) (Asp 2-Lys 134) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human CPLX2 consists of 144 amino acids and has a calculated molecular mass of 16.8 kDa. It migrates as an 21 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

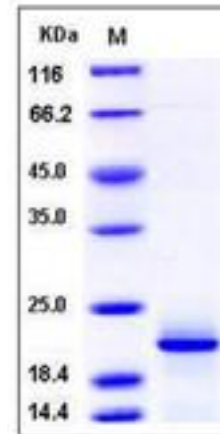
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Complexin-2 (CPLX2), a member of the complexin/synaphin family, is a soluble pre-synaptic protein believed to regulate neurotransmitter release from pre-synaptic terminals. Complexins are soluble proteins that regulate the activity of soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) complexes necessary for vesicle fusion. Complexins are unable to bind to monomeric SNARE proteins but bind with high affinity to ternary SNARE complexes and with lower affinity to target SNARE complexes. Complexin 1 (CX1) and complexin 2 (CX2) are presynaptic proteins that modulate neurotransmitter release and are used as markers of inhibitory and excitatory synapses, respectively. CPLX2 is localized in pre-synaptic terminals in mature brain. The G71-P89 region of CPLX2 is essential and sufficient for preferential axonal distribution. CPLX2 participates in the Ca(2+)-sensitive regulatory pathway for zymogen granule exocytosis. Complexin-2 is a key player in normal neurological function, and its downregulation could lead to changes in neurotransmitter release sufficient to cause significant behavioural abnormalities such as depression. It is involved in synaptogenesis and the modulation of neurotransmitter release.

References

- 1.Lee HJ, *et al.* (2005) Association study of polymorphisms in synaptic vesicle-associated genes, SYN2 and CPLX2, with schizophrenia. *Behav Brain Funct.* 1: 15.
- 2.Salimi K, *et al.* (2008) Regulation of complexin 1 and complexin 2 in the developing human prefrontal cortex. *Synapse.* 62(4): 273-82.
- 3.Kataoka M, *et al.* (2009) Identification of a minimal segment of complexin II essential for preferential distribution in axons. *J Neurochem.* 108(5): 1109-15.

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