Data Sheet (Cat.No.TMPY-02025)

TargetMol

CPLX2 Protein, Human, Recombinant (His)

General Information

Synonyms:	CPX-2;Hfb1;921-L;complexin 2;CPX2
Protein Construction:	A DNA sequence encoding the human CPLX2 (Q6PUV4-1) (Asp 2-Lys 134) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q6PUV4-1
Molecular Weight:	16.8 kDa (predicted); 21 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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.

Reference

Lee HJ,et al.(2005) Association study of polymorphisms in synaptic vesicle-associated genes, SYN2 and CPLX2, with schizophrenia. Behav Brain Funct. 1: 15.

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Glynn D,et al.(2010) Clorgyline-mediated reversal of neurological deficits in a Complexin 2 knockout mouse. Hum Mol Genet. 19(17): 3402-12.

Falkowski MA,et al.(2010) Complexin 2 modulates vesicle-associated membrane protein (VAMP) 2-regulated zymogen granule exocytosis in pancreatic acini. J Biol Chem. 285(46): 35558-66.