

Product datasheet for **RR213969**

Cbln1 (NM_001109127) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Cbln1 (NM_001109127) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Cbln1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RR213969 representing NM_001109127
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCTGGGCGTCGTGGAGCTGCTGTTGTTGGGGCTGCGTGGCTGGCAGGCCAGCCCGCGGGCAGAATG
 AGACAGAACCCATCGTCCTGGAGGGCAAGTGCCTGGTGGTGTGTGACTCCAACCCACGTCGACCCCTAC
 GGGCACTGCTCTGGGCATCTCTGTGCGCTCGGGCAGCGCCAAGGTGGCTTTCTCTGCCATCAGGAGCACC
 AACCATGAGCCGTCGAGATGAGTAATCGCACCATGATCATCTACTTCGACCAGGTACTAGTGAACATCG
 GGAACAACCTTTGACTCAGAACGACGACTTTTCATCGCCCCGCGCAAAGGCATCTACAGTTTAACTTCCA
 CGTGGTGAAAGTCTACAACAGACAGACCATCCAGGTGAGCCTCATGTTGAACGGTTGGCCGGTGATTTCA
 GCCTTCGCCGGCGACCAAGACGTGACACGCGAGGCTGCCAGCAACGGCGTCTCATCCAGATGGAGAAAG
 GCGACCGAGCATACCTCAAGCTGGAGCGGGGAACTTGATGGGGGGCTGGAAGTACTCAACCTTCTCTGG
 ATTCTCGTGTTTCCCCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR213969 representing NM_001109127
 Red=Cloning site Green=Tags(s)

MLGVVELLLLGAAWLAGPARGQNETEPIVLEGKCLVVCDSNPTSDPTGTALGISVRSGSAKVAFSAIRST
 NHEPSEMSNRTMIYFDQVLVNIGNNFDSESTFIAPRKGIYSFNHVVKVYNRQTIQVSLMLNGWPVIS
 AFAGDQDVTREASNGVLIQMEKGDRAYLKLERGNLMGGWKYSTFSGFLVFPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI


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Cloning Scheme:


ACCN: NM_001109127

ORF Size: 579 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001109127.1](#), [NP_001102597.1](#)

RefSeq Size: 2444 bp

RefSeq ORF: 582 bp

Locus ID: 498922

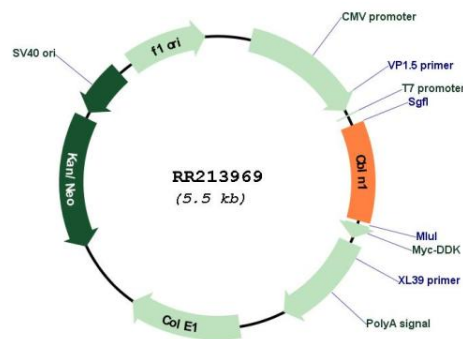
UniProt ID: [P63182](#)

Cytogenetics: 19p11

MW: 21.1 kDa

Gene Summary: Required for synapse integrity and synaptic plasticity. During cerebellar synapse formation, essential for the matching and maintenance of pre- and post-synaptic elements at parallel fiber-Purkinje cell synapses, the establishment of the proper pattern of climbing fiber-Purkinje cell innervation, and induction of long-term depression at parallel fiber-Purkinje cell synapses. Plays a role as a synaptic organizer that acts bidirectionally on both pre- and post-synaptic components. On the one hand induces accumulation of synaptic vesicles in the pre-synaptic part by binding with NRXN1 and in other hand induces clustering of GRID2 and its associated proteins at the post-synaptic site through association of GRID2. NRXN1-CBLN1-GRID2 complex directly induces parallel fiber protrusions that encapsulate spines of Purkinje cells leading to accumulation of GRID2 and synaptic vesicles. Required for CBLN3 export from the endoplasmic reticulum and secretion (By similarity). NRXN1-CBLN1-GRID2 complex mediates the D-Serine-dependent long term depression signals and AMPA receptor endocytosis (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR213969