

## Product datasheet for **RN200840**

### **Cdyl (NM\_001014145) Rat Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Cdyl (NM_001014145) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Cdyl
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >RN200840 representing NM\_001014145  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGCTTAGGCAGTAGCCAGCCTAGTACAAAGGAAGCCGAGCCCTGCACACTTCAAGAGAAAGAGGAAC  
 ATCCTGTTGATGACACCAGACAGCAAAATAATGCGGTTCTCTGCAACAGTCTCAGATCCCGATCAAGTGTC  
 CCCTGCAGTTCAAGACGCGGAGACTCAGGTGAAAGTATTGTTGACAAAAGAAACAAGAAAGGGAAG  
 ACAGAGTACCTGGTGGATGAAAGGCTATGACAGTGAGGATGACACATGGGAGCCGGAGCAGCACCTGG  
 TAAACTGTGAGGAATACATCCATGACTTCAACCGCGCCACAACGAGAGGCAAAAGGAGTACCCTGGC  
 TCGTGCCAAACAGAGCCTCCCCAGCAACGCCGGAAGCAGATCTCCAGGTCCACCCACAGCGCCCTCTC  
 AAGACCAACCCAAAGCACTTGTGGTAGGCAAAGATCATGAGTCCAAAACCAACCAGCTGTTGGCTACCA  
 GCCAGAAGTTCAGGAAAAACACAGCTCCATCTCTTGCAAACCGCAAGAACATGGACTCGCCAAGTCAGG  
 GATCAAAATTCGTGCCTAAGAGCCCCATTAAGGGCAGGACCTCGATTGACGGCTTCCACGGGGAGAGC  
 CCTGAGAAGCTGGATCAGGGTGCCGAGGACACTGTAACCCAGAGGTGACTGCAGAGAAGCCCACTGGGG  
 CTTTGCTGGGCCCTGGTGCAAGACGAGCCAGGATGGGGAGCAGGCCCCGAATACATTCAGTGCCTCA  
 GTTTTCTGGCCCCGTGACTGCTGCCATGGCCACGACCTTAGCTGTTAATGGAAAAGGTACATCTCCATTC  
 ATGGATGCGCTAACAGCCAACGGAACAGTCACCATACAAACATCTGTAACAGGAGTGACAGCCGGGAAAA  
 GGAAATTTATTGACGACAGAAGAGACCAACCTTTTGACAAGCGGTTGCGTTTCAGTGTGAGGCAGACAGA  
 GAGTGCCTACAGATACAGAGATATTGTCGTCAGGAAGCAAGATGGCTTCACCACATCTTGTTATCCACA  
 AAATCATCAGAGAATAACTCACTAAACCCAGAGGTGATGAAGGAAGTGCAGAGCGCCCTGAGCACAGCCG  
 CGGCCGACGACAGCAAGCTGGTGTCTCAGCGCTGTGGCAGCGTCTTCTGTTGTGGCTGGACTTTAT  
 TTATTTTATACGACGCCCTCACAGATGACCGAAAGAGAGAAAGCACTAAAATGGCAGAAGCTATCAGAAAC  
 TTCGTGAATACTTTCATTAGTTAAGAAGCCTATTATTGTAGCTGTTAATGGCCAGCCATTGGACTAG  
 GAGCATCCATATTGCCTCTTTGTGATGTGGTTGGGCTAACGAAAAGGCTTGGTTTCAAACACCCTATAC  
 CACCTTCGGACAGAGTCCAGATGGCTGCTACCGTTATGTTCCCAAGATTATGGGAGGAGCGTCTGCA  
 AATGAGATGCTACTCAGTGGGAGGAAGTTGACGGCACAGGAGCGTGCGCAAGGGCCTGGTCTCCAGG  
 TGTTTTGGCCAGGAACCTTCACGCAGGAAGTCATGGTTCGAATCAAGGAGCTGGCCTCATGTAACCCAAT  
 TGTCTGGAGGAATCAAAGCCCTGGTGCCTGCAATATGAAGATGGAGTTGGAGCAGGCCAATGAGAGA  
 GAGTGTGACGCACTGAAGAAGATCTGGGCTCGGCCAGGCATGGACTCCATGTTAAAGTACTTACAGA  
 GGAAAATCGATGAGTTC**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_001014145
- Insert Size:** 1770 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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\\_001014145.1](#), [NP\\_001014167.1](#)

**RefSeq Size:** 2208 bp

**RefSeq ORF:** 1770 bp

**Locus ID:** 361237

**UniProt ID:** [Q6AYK9](#)

**Cytogenetics:** 17p12

**Gene Summary:** Isoform 2: Chromatin reader protein that recognizes and binds histone H3 trimethylated at 'Lys-9', dimethylated at 'Lys-27' and trimethylated at 'Lys-27' (H3K9me3, H3K27me2 and H3K27me3, respectively). Part of multimeric repressive chromatin complexes, where it is required for transmission and restoration of repressive histone marks, thereby preserving the epigenetic landscape. Required for chromatin targeting and maximal enzymatic activity of Polycomb repressive complex 2 (PRC2); acts as a positive regulator of PRC2 activity by bridging the pre-existing histone H3K27me3 and newly recruited PRC2 on neighboring nucleosomes. Acts as a corepressor for REST by facilitating histone-lysine N-methyltransferase EHMT2 recruitment and H3K9 dimethylation at REST target genes for repression (By similarity). Involved X chromosome inactivation in females: recruited to Xist RNA-coated X chromosome and facilitates propagation of H3K9me2 by anchoring EHMT2 (By similarity). Required for neuronal migration during brain development by repressing expression of RHOA (By similarity). In addition to act as a chromatin reader, acts as a hydrolyase. Shows crotonyl-coA hydratase activity by mediating the conversion of crotonyl-CoA ((2E)-butenoyl-CoA) to beta-hydroxybutyryl-CoA (3-hydroxybutanoyl-CoA), thereby acting as a negative regulator of histone crotonylation (By similarity). Histone crotonylation is required during spermatogenesis; down-regulation of histone crotonylation by CDYL regulates the reactivation of sex chromosome-linked genes in round spermatids and histone replacement in elongating spermatids (By similarity). Displays acetyltransferase activity toward tubulin in vitro; such activity is however unsure in vivo and additional evidences would be required to confirm this result (PubMed:28681565).[UniProtKB/Swiss-Prot Function]