

## Product datasheet for **MR208673**

### **Cdyl (NM\_001123386) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Cdyl (NM_001123386) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cdyl
Synonyms:	AI325931
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>MR208673 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCTCCGAGGAGCTGTACGAGGTGGAAGTATCGTTGACAAAAGGAAAAACAAGAAAGGAAGACAG  
 AATATCTGGTGCGGTGGAAAGGCTATGACAGTGAGGATGACACGTGGGAGCCTGAGCAGCACCTGGTGAA  
 CTGTGAGGAATACATCCATGACTTCAACCGCGCCACAACGAGAGGCAAAAGGAAGGTAGCCTGGCTCGT  
 GCCAGCAGAGCCTCCCCAGCAACGCGCGGAAGCAGATTTCCAGGTCCACCCACAGCACTCTCTCCAAGA  
 CCAACTCCAAAGCACTTGTGGTAGGCAAGATCATGAGTCCAAAAGCAGCCAGCTGTTGGCTGCCAGCCA  
 GAAGTTCAGGAAAAACCCAGCCCATCTCTGCAAACCGCAAGAATGGACCTCGCCAAGTCAGGGATC  
 AAAATTCTCGTCCTAAGAGCCCCGTTAAGGGCAGGACCTCGGTTGATGGCTTTCAGGGGAGAGCCCCG  
 AGAAGCTGGACCCTGTGGATCAGGGTCCGAGGACACTGTAGCCCGAGAGGTGACTGCAGAGAAGCCAC  
 TGGGGCTTTGCTGGGCCCTGGTCCGGAGCGAGCCAGGATGGGGAGCAGGCCCCGAATACATCCACTAGTG  
 CCTCAGGTTTCTGGCCCCGTGACTGCTGCCATGGCCACAGGCTTAGCTGTTAATGAAAAAGGTACATCTC  
 CATTATGGATGCGCTAGCAGCCAACGGAACAGTCACCATACAGACATCCGTAACAGGAGTGACAGCCGG  
 GAAAAGGAAATTTATTGACGACAGAAGAGACCAACCTTTTGACAAGCGGTTGCGTTTCAGTGTGAGGCAG  
 ACAGAGAGTGCCTACAGATACAGAGATATTGTCGTGAGGAAGCAAGATGGCTTACCCACATCTTGTAT  
 CCACAAAATCGTCAGAGAATAACTCACTAAACCCAGAGGTGATGAAAGAAGTGCAGAGCGCCCTGAGCAC  
 AGCTGCAGCCGACGACAGCAAGCTGGTCTGCTCAGCGCCGTGGGCAGCGTCTTCTGCTGTGGTCTGGAC  
 TTTATTTATTTTATTCGCGCCCTACAGATGACCGAAAGAGAGAAAGCACTAAAAATGGCAGACGCTATCA  
 GAAACTTCGTGAATACTTTCATTAGTTAAGAAGCCTATTATTGTAGCTGTTAATGGCCAGCCATTGG  
 ACTAGGAGCATCCATATTGCCTCTTTGTGATGTGGTTTGGGCTAACGAAAAGGCTTGTTTCAACACCC  
 TATACCACCTTCGGACAGAGTCCAGATGGCTGCTCTACCGTTATGTTTCCCAAGATTATGGGAGGAGCAT  
 CTGCGAATGAAATGCTGTTCACTGGGCGGAAGTTGACGGCACAGGAGGCCTGTGGCAAGGCTGTGCTCTC  
 CCAGGTGTTTTGGCCAGGAACCTTCACACAGGAAGTCATGGTTCGAATCAAGGAGCTGGCTTCATGTAAC  
 CCAGTTGCTCTGGAGGAATCCAAAGCCCTGGTGCCTGCAATATGAAGATGGAGCTAGAGCAGGCCAATG  
 AGAGAGAATGTGAAGTGTGAAGAAGATCTGGGGCTCCGCCAGGCGATGGACTCCATGTTAAAGTACTT  
 ACAGAGGAAAAATCGATGAGTTC

**ACGCGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208673 protein sequence  
 Red=Cloning site Green=Tags(s)

MASEELYEVESIVDKRKNKKGKTEYLVRWKGYDSEDDTWEPEQHLVNCEEYIHDFNRRHNERQKEGSLAR  
 ASRASPSNARKQISRSTHSTLSKTNKALVVGKDHESSQLLAASQKFRKNPAPSLANRKNMDLAKSGI  
 KILVPKSPVKGRTSVDGFQGESPEKLDPVQGAEDTVAPEVTAEKPTGALLGPGAERARMGSRPRIHPLV  
 PQVSGPVTAAMATGLAVNGKGTSPFMDALAANGVTIQTSVTGTAGKRKFIDRRDQPFDKRLRFVSRQ  
 TESAYRYRDIVVRKQDGFTHILLSTKSENNSLNPEVMKEVQSALSTAAADDSKLVLLSAVGSVFCCGLD  
 FIYFIRRLTDDRKRESTMADAIRNFVNTFIQFKKPIIVAVNGPAIGLGASILPLCDVVWANEKAWFQTP  
 YTTFGQSPDGCSTVMFPKIMGGASANEMLFSGRKLTAQEACGKGLVSQVFWPGTFTQEVVMRIKELASCN  
 PVVLEESKALVRCNMKMELEQANERECEVLKKIWGSAQGMDSMLKYLQRKIDEF

**TR**TRPLE**QKL**ISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001123386

**ORF Size:** 1635 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\\_001123386.1](#), [NP\\_001116858.1](#)

**RefSeq Size:** 3494 bp

**RefSeq ORF:** 1635 bp

**Locus ID:** 12593

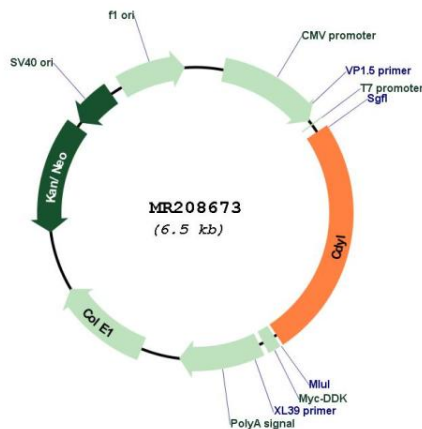
**UniProt ID:** [Q9WTK2](#)

**Cytogenetics:** 13 14.39 cM

**MW:** 60.1 kDa

**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) (PubMed:12947414). Part of multimeric repressive chromatin complexes, where it is required for transmission and restoration of repressive histone marks, thereby preserving the epigenetic landscape (PubMed:12947414). 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 (By similarity). 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 (PubMed:24144980). Required for neuronal migration during brain development by repressing expression of RHOA (PubMed:28076783). In addition to act as a chromatin reader, acts as a hydro-lyase (By similarity). 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 (PubMed:28803779). May have histone acetyltransferase activity; such activity is however unsure in vivo (PubMed:12072557).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR208673