

Product datasheet for **MG208673**

Cdyl (BC062123) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cdyl (BC062123) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cdyl
Synonyms:	A1325931
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208673 representing BC062123
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCTCCGAGGAGCTGTACGAGGTGGAAAGTATCGTTGACAAAAGGAAAAACAAGAAAGGAAGACAG
 AATATCTGGTGGGTGGAAAGGCTATGACAGTGAGGATGACACGTGGGAGCCTGAGCAGCACCTGGTGAA
 CTGTGAGGAATACATCCATGACTTCAACCGCGCCACAACGAGAGGCAAAAAGGAAGGTAGCCTGGCTCGT
 GCCAGCAGAGCCTCCCCAGCAACGCCGGAAGCAGATTTCCAGGTCCACCCACAGCACTCTCTCCAAGA
 CCAACTCCAAAGCACTTGTGGTAGGCAAGATCATGAGTCCAAAAGCAGCCAGCTGTTGGCTGCCAGCCA
 GAAGTTCAGGAAAAACCCAGCCCATCTCTTGC AAAACCGCAAGAACATGGACCTCGCAAGTCAGGGATC
 AAAATTCTCGTCCTAAGAGCCCCGTTAAGGGCAGGACCTCGGTTGATGGCTTTCAGGGGGAGAGCCCCG
 AGAAGCTGGACCCTGTGGATCAGGGTCCGAGGACACTGTAGCCCCAGAGGTGACTGCAGAGAAGCCAC
 TGGGGCTTTGCTGGGCCCTGGTCCGAGCGAGCCAGGATGGGGAGCAGGCCCGAATACATCCACTAGT
 CCTCAGGTTTCTGGCCCCGTGACTGCTGCCATGGCCACAGGCTTACTGTTAATGGAAAAGGTACATCTC
 CATTTCATGGATGCGCTAGCAGCCAACGGAACAGTCACCATACAGACATCCGTAACAGGAGTGACAGCCGG
 GAAAAGGAAATTTATTGACGACAGAAGAGACCAACCTTTTGACAAGCGGTTGCGTTTCAGTGTGAGGCGAG
 ACAGAGAGTGCCTACAGATACAGAGATATTGTCGTGAGGAAGCAAGATGGCTTCACCCACATCTTGTAT
 CCACAAAATCGTCAGAGAATAACTCACTAAACCCAGAGGTGATGAAAAGAAGTGCAGAGCGCCCTGAGCAC
 AGCTGCAGCCGACGACAGCAAGCTGGTCTGCTCAGCGCCGTGGGACGCTCTTCTGCTGTGGTCTGGAC
 TTTATTTATTTTATTCGCGCCCTCACAGATGACCGAAAAGAGAGAAAGCACTAAAATGGCCAGCCATTGA
 GAAACTTCGTGAATACTTTCATTCAGTTAAGAAGCCTATTATTGTAGCTGTTAATGGCCAGCCATTGG
 ACTAGGACATCCATATTGCCTCTTTGTGATGTGGTTTGGGCTAACGAAAAGGCTTGGTTTCAAACACCC
 TATACCACCTTCGACAGAGTCCAGATGGCTGCTCTACCGTTATGTTTCCCAAGATTATGGGAGGAGCAT
 CTGCGAATGAAATGCTGTTCACTGGGCGGAAGTTGACGGCACAGGAGCCTGTGGCAAGGGTCTGGTCTC
 CCAGGTGTTTTGGCCAGGAACCTTACACAGGAAGTCAATGTTTCAAGGAGCTGGCTTCAATGTAAC
 CCAGTTGCTCTGGAGGAATCCAAAGCCCTGGTGCCTGCAATATGAAGATGGAGCTAGAGCAGGCCAATG
 AGAGAGAATGTGAAGTGTGAAGAAGTCTGGGGCTCCGCCAGGCATGGACTCCATGTTAAAGTACTT
 ACAGAGGAAAATCGATGAGTTC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG208673 representing BC062123
 Red=Cloning site Green=Tags(s)

MASEELYEVEISIVDKRKNKKGKTEYLVRWKGYSDDTWEPEQHLVNCEEYIHDFNRRHNERQKEGLAR
 ASRASPSNARKQISRSTHSTLSKTNKALVVGKDHEKSSQLLAASQKFRKNPAPSLANRKNMDLAKSGI
 KILVPKSPVKGRTSVDGFQGESPEKLDPVQGAEDTVAPEVTAEKPTGALLGPGAERARMGSRPRIHPLV
 PQVSGPVTAAMATGLAVNGKGTSPFMDALAANGTVTIQTSVTGVTAGKRKFIDRRDQPFDKRLRFVSRQ
 TESAYRYRDIVVRKQDGFTHILLSTKSENNSLNPEVMKEVQSALSTAAADDSKLVLLSAGSVFCCGLD
 FIYFIRRLTDDRKRETKMADAIRNFVNTFIQFKKPIIVAVNGPAIGLGASILPLCDVWVANEKAWFQTP
 YTTFGQSPDGCSTVMFPKIMGGASANEMLFSGRKLTAQEACGKGLVSQVFWPGTFTQEVVMRIKELASCN
 PVVLEESKALVRCNMKMELEQANERECEVLKKIWGSAQGMDSMLKYLQRKIDEF

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

ACCN:	BC062123
ORF Size:	1634 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:	<ol style="list-style-type: none">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:	BC062123 , AAH62123
RefSeq Size:	3596 bp
RefSeq ORF:	1634 bp
Locus ID:	12593
Cytogenetics:	13 14.39 cM

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]