

**CDYL Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16624a****Specification**

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**CDYL Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9Y232</a>
Other Accession	<a href="#">NP_004815.3</a> , <a href="#">NP_001137443.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	66482
Antigen Region	6-34

**CDYL Antibody (N-term) - Additional Information****Gene ID** 9425**Other Names**

Chromodomain Y-like protein, CDY-like, CDYL, CDYL1

**Target/Specificity**

This CDYL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 6-34 amino acids from the N-terminal region of human CDYL.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CDYL Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**CDYL Antibody (N-term) - Protein Information****Name** CDYL {ECO:0000303|PubMed:10192397, ECO:0000312|HGNC:HGNC:1811}**Function** [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:[19808672](#), PubMed:[28402439](#)). Part of multimeric repressive chromatin complexes, where it is required for transmission and restoration of repressive histone marks, thereby preserving the epigenetic landscape (PubMed:[28402439](#)). 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 (PubMed:[22009739](#)). Acts as a corepressor for REST by facilitating histone-lysine N-methyltransferase EHMT2 recruitment and H3K9 dimethylation at REST target genes for repression (PubMed:[19061646](#)). Involved in X chromosome inactivation in females: recruited to Xist RNA-coated X chromosome and facilitates propagation of H3K9me2 by anchoring EHMT2 (By similarity). Promotes EZH2 accumulation and H3K27me3 methylation at DNA double strand breaks (DSBs), thereby facilitating transcriptional repression at sites of DNA damage and homology-directed repair of DSBs (PubMed:[29177481](#)). Required for neuronal migration during brain development by repressing expression of RHOA (By similarity). By repressing the expression of SCN8A, contributes to the inhibition of intrinsic neuronal excitability and epileptogenesis (By similarity). In addition to acting as a chromatin reader, acts as a hydro-lyase (PubMed:[28803779](#)). 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 (PubMed:[28803779](#)). 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). By regulating histone crotonylation and trimethylation of H3K27, may be involved in stress-induced depression-like behaviors, possibly by regulating VGF expression (By similarity).

#### **Cellular Location**

[Isoform 2]: Nucleus. Chromosome. Note=Recognizes and binds histone H3 trimethylated at 'Lys-9', dimethylated at 'Lys-27' and trimethylated at 'Lys-27' (H3K9me3, H3K27me2 and H3K27me3, respectively) on chromatin (PubMed:[19808672](#)). Multimerization is required for chromatin-binding (PubMed:[19808672](#)). Recruited to sites of DNA double strand breaks in a PARP1-dependent fashion (PubMed:[29177481](#))

#### **Tissue Location**

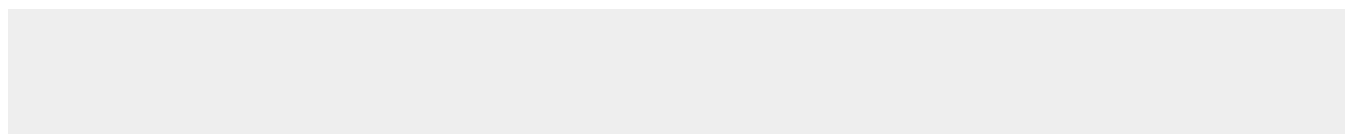
Expressed in the hippocampus with reduced expression in epileptic tissue compared to normal adjacent tissue (at protein level) (PubMed:[28842554](#)). Ubiquitous (PubMed:[19808672](#)) Expressed at moderate levels in all tissues examined (PubMed:[19808672](#)) Isoform 2: Most abundantly expressed isoform (PubMed:[19808672](#))

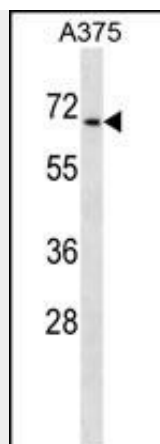
#### **CDYL Antibody (N-term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **CDYL Antibody (N-term) - Images**





CDYL Antibody (N-term) (Cat. #AP16624a) western blot analysis in A375 cell line lysates (35ug/lane). This demonstrates the CDYL antibody detected the CDYL protein (arrow).

### **CDYL Antibody (N-term) - Background**

Chromodomain Y is a primate-specific Y-chromosomal gene family expressed exclusively in the testis and implicated in infertility. Although the Y-linked genes are testis-specific, this autosomal gene is ubiquitously expressed. The Y-linked genes arose by retrotransposition of an mRNA from this gene, followed by amplification of the retroposed gene. Proteins encoded by this gene superfamily possess a chromodomain, a motif implicated in chromatin binding and gene suppression, and a catalytic domain believed to be involved in histone acetylation. Multiple proteins are encoded by transcript variants of this gene.

### **CDYL Antibody (N-term) - References**

- Franz, H., et al. J. Biol. Chem. 284(50):35049-35059(2009)
- Landa, I., et al. PLoS Genet. 5 (9), E1000637 (2009) :
- Mulligan, P., et al. Mol. Cell 32(5):718-726(2008)
- Nousiainen, M., et al. Proc. Natl. Acad. Sci. U.S.A. 103(14):5391-5396(2006)
- Caron, C., et al. EMBO Rep. 4(9):877-882(2003)