

Resource Summary Report

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pdCas9-DNMT3A-PuroR (ANV)

RRID:Addgene_71684

Type: Plasmid

Proper Citation

RRID:Addgene_71684

Plasmid Information

URL: <http://www.addgene.org/71684>

Proper Citation: RRID:Addgene_71684

Insert Name: S. pyogenes dCas9 fused with the inactivated (E756A) catalytic domain of human DNMT3A (amino acids P602-V912) and T2A-PuroR

Organism: Homo sapiens

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:26969735](#)

Vector Backbone Description: Backbone Size:4246; Vector Backbone:PX462; Vector Types:Mammalian Expression, CRISPR; Bacterial Resistance:Ampicillin

Comments: The catalytic domain of human DNMT3A (amino acids P602-V912) was derived from the plasmid pcDNA3/Myc-DNMT3A (Addgene, plasmid #35521) (Chen et al., 2005, J Cell Biochem 95: 902-917). Undesired BbsI restriction site was removed by site-directed mutagenesis, without affecting the amino acid sequence. The DNMT3A active site motif ENV was mutated to ANV (E756A). Plasmid pSpCas9n(BB)-2A-Puro (PX462) (Addgene, plasmid #48141) (Ran et al., 2013, Nat Protoc 8: 2281-2308) was used as a backbone. Additional H840A mutation was introduced into Cas9n D10A nickase.

Plasmid Name: pdCas9-DNMT3A-PuroR (ANV)

Relevant Mutation: D10A and H840A in S.pyogenes Cas9; E756A inactivating mutation in H. sapiens DNMT3A

Record Creation Time: 20220422T222441+0000

Record Last Update: 20260902T050051+0000

Ratings and Alerts

No rating or validation information has been found for pdCas9-DNMT3A-PuroR (ANV).

No alerts have been found for pdCas9-DNMT3A-PuroR (ANV).

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 4 mentions in open access literature.

Listed below are recent publications. The full list is available at [nidm-terms](#) .

Tiane A, et al. (2023) From methylation to myelination: epigenomic and transcriptomic profiling of chronic inactive demyelinated multiple sclerosis lesions. *Acta neuropathologica*, 146(2), 283.

Metzger D, et al. (2022) Host Cell Transcriptional Tuning with CRISPR/dCas9 to Mitigate the Effects of Toxin Exposure. *ACS synthetic biology*, 11(11), 3657.

Tiane A, et al. (2021) DNA methylation regulates the expression of the negative transcriptional regulators ID2 and ID4 during OPC differentiation. *Cellular and molecular life sciences : CMLS*, 78(19-20), 6631.

Cali CP, et al. (2019) Targeted DNA methylation of neurodegenerative disease genes via homology directed repair. *Nucleic acids research*, 47(22), 11609.