

CUTANA™ SsDddA Inhibitor Protein, SsDddl

Catalog No	15-1038	Type	Deaminase inhibitor
Lot No	26229001-62	Source	<i>E. coli</i>
Pack Size	25 µL	Epitope Tag	N-terminal 8xHis
Concentration	1000 µM	MW	15.7 kDa

DESCRIPTION

Products in EpiCypher's IDEA Toolbox (Innovation and Discovery of Epigenetic Applications) offer access to reagents without known or fully defined uses, enabling researchers to explore cutting-edge applications. Due to their novelty and unexplored potential, EpiCypher will engage in limited technical support.

SsDddl is the cognate inhibitor of SsDddA, used to stop SsDddA deamination activity. SsDddA and SsDddl form a 1:1 complex. Therefore, inhibition is expected to occur at equimolar ratio. For rapid inhibition, SsDddl is used in a 5x molar excess to quench SsDddA deaminase activity in the Stergachis Lab DAF-seq Protocol available on Github [1].

Key Advantages

- **Ready to Use** | Commercially available SsDddl eliminates the need to express, purify, and validate your own inhibitor protein so you can focus on experimenting with the actual assay instead.
- **Quality Assured** | SsDddl comes with a Certificate of Analysis verifying both purity and activity, reducing sources of experiment-to-experiment variability that can come with homebrewed reagents.
- **Exclusivity** | EpiCypher is the only commercial provider of SsDddl, so your lab has reliable, ongoing access to reagents that cannot be sourced reliably elsewhere.

RECOMMENDED ACCESSORY PRODUCTS

<u>Item</u>	<u>Cat No</u>
CUTANA SsDddA Deaminase	15-1037

TECHNICAL INFORMATION

Storage	Store at -20°C. Refer to product label for expiration date.
Formulation	50 mM Tris pH 7.8, 500 mM NaCl, 0.1 mM EDTA, 10 µM ZnCl ₂ , 50% glycerol

APPLICATION NOTES

SsDddl is capable of quenching SsDddA in all SsDddA compatible buffers listed in the application notes on the SsDddA technical datasheet. Biologically, SsDddl and SsDddA form a 1:1 complex and therefore inhibition should be observed at a 1:1 molar ratio. To ensure rapid quenching of deaminase activity, users are encouraged to use a molar excess of SsDddl to SsDddA. The exact molar excess needed likely depends on the application and assay conditions. SsDddl is provided at a 10x concentration compared to SsDddA. Users wishing to add 5x molar excess SsDddl to SsDddA (as is instructed in the Stergachis Lab DAF-seq protocol, ref [1]) should use 1 μ L of SsDddl for every 2 μ L of SsDddA (15-1037).

REFERENCES

[1] Stergachis Lab. The Guide for DAF-seq: Protocol. <https://fiberseq.github.io/The-Guide-for-DAF-seq/protocol/protocol.html>. Accessed 24 September 2026

CERTIFICATE OF ANALYSIS

Quality Control Metrics

Protein Purity Assay (SDS-PAGE)

SsDddl is >90% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

Result

Pass

Functional Testing (SsDddA inhibition)

Each lot of CUTANA™ SsDddA Inhibitor is validated for inhibition of SsDddA cytosine deaminating activity. A cytosine-containing double-stranded DNA (dsDNA) template is incubated with constant SsDddA and varied concentration of SsDddl. The enzyme generated uracil-containing dsDNA is then incubated with USER® enzyme in the corresponding 1X rCutSmart™ Buffer (NEB, M5505) to cleave the phosphodiester backbone at uracil sites. The integrity of the resulting product is measured using a fluorescence-based assay, where a decrease in fluorescence is observed with increased nicking by USER. Decreasing USER mediated nicking is observed with increasing quantities of SsDddl. Reactions with >2.5 molar excess SsDddl compared to SsDddA have no detectable nicking.

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PUBLISH DATE

10/6/2026

APPROVED BY



ANDREA JOHNSTONE, PHD

SENIOR DIRECTOR OF PRODUCT MANAGEMENT

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications, and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper, and intended usage. This warranty does not extend to anyone other than the original purchase of the Product ("Buyer"). No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s). There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.