

DNA Degradase Plus™

Cat. Nos. E2020 (250 Units)
E2021(1,000 Units)

Storage: -20 °C



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

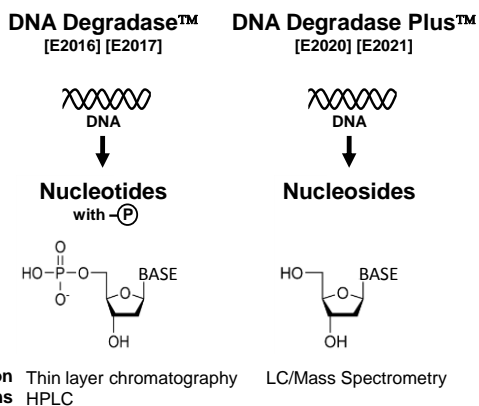
Product Information

Highlights:

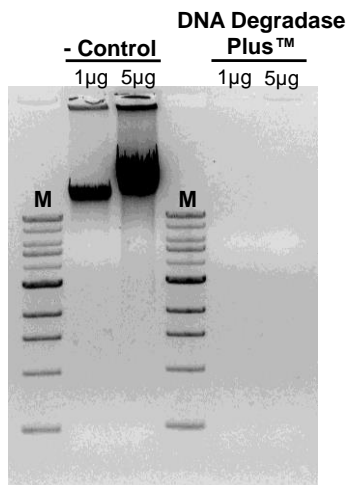
- Quick and simple procedure for generating single nucleosides from DNA for quantitative analysis via LC/MS.
- 1 hour, single-enzyme digest vs. conventional 6-16 hour multi-step enzyme digestion protocols.

Description:

DNA Degradase Plus™ from Zymo Research is a nuclease mix that *quickly* and *efficiently* degrades DNA to its individual nucleoside components. Since nucleosides lack negatively charged phosphate, DNA Degradase Plus™ is ideal for whole-genome DNA methylation analysis by LC/MS. Digestion with the enzyme is performed via a one-step procedure that is faster and simpler than other available methods.



DNA Degradase Plus™ degrades DNA to individual nucleosides. Absence of the charged phosphate group facilitates quantitation via LC/MS. For applications compatible with nucleotides (e.g.- TLC, HPLC, etc.) see DNA Degradase™ (cat nos. E2016, E2017).



DNA Degradase Plus™ Efficiently Degrades DNA: 1 µg, 5 µg of λ DNA incubated with 1 µl (5 U) of DNA Degradase Plus™ in 25 µl reaction volume (see *Standard Reaction Setup*) and incubated at 37°C for 1 hour. "M" is a 1kb DNA ladder (Zymo Research).

Product Contents:

	Cat. No. E2020	Cat. No. E2021	Storage
DNA Degradase Plus™	250 units	1,000 units	-20°C
10X DNA Degradase™ Reaction Buffer (E2016-2)	1 ml	1 ml	-20°C

Storage: Store reagents at -20°C for up to 12 months. Avoid repeated freeze/thawing. Prolonged storage should be ≤ -70 °C.

Enzyme Concentration: 5 units/µl

Unit Definition: One unit (1 U) is defined as the amount of enzyme required to degrade 1 µg of λ DNA to individual nucleosides in a total reaction volume of 25 µl for 1 hour at 37°C.

Reaction Conditions: DNA Degradase Plus™ in 1X DNA Degradase™ Reaction Buffer. Incubate reaction mixtures at 37°C for ≥1 hour.

Inactivation: Heat-inactivate at 70°C for 20 minutes.

Standard Reaction Setup: The setup (below) is an example of a typical DNA Degradase Plus™ reaction in a 25 µl final volume. However, the volumes can be adjusted accordingly depending on experimental requirements.

2 µl	DNA at 500 ng/µl
2.5 µl	10X DNA Degradase™ Reaction Buffer
1 µl	DNA Degradase Plus™ (5 units/µl)
19.5 µl	ddH ₂ O
25 µl	Total Volume

Incubate at 37°C for 2 hours (see Note 1, below).

Notes:

1. Complete digestion of DNA.

For *complete* digestion of DNA (gDNA, plasmid, amplified DNA, etc.), reactions should be carried out at 37 °C for ≥2 hours. Even though 1 unit of DNA Degradase Plus™ is sufficient to digest 1 µg of DNA down to individual nucleosides at 37 °C in 1 hour, we recommend "overdigesting" with 5-10 fold enzyme to ensure complete digestion of DNA.

2. Sample DNA purity

The digestion reaction can be sensitive to extraneous components from crude DNA preparations or DNA samples carried over from prior reactions. It is recommended that impure preparations of DNA be "cleaned" prior to manipulation (e.g., DNA Clean and Concentrator™ from Zymo Research).

ZYMO RESEARCH CORP.

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Related Epigenetics Products:

Product Name	Size	Cat. No.
BISULFITE TREATMENT OF DNA		
EZ DNA Methylation™ Kit	50 rxns.	D5001
	200 rxns.	D5002
	2 x 96 rxns.	D5003
	2 x 96 rxns.	D5004
EZ DNA Methylation-Gold™ Kit	50 rxns.	D5005
	200 rxns.	D5006
	2 x 96 rxns.	D5007
	2 x 96 rxns.	D5008
EZ DNA Methylation-Direct™ Kit	50 rxns.	D5020
	200 rxns.	D5021
	2 x 96 rxns.	D5022
	2 x 96 rxns.	D5023
EZ DNA Methylation-Startup™ Kit	50 rxns.	D5024
EZ Bisulfite DNA Clean-up Kit™	50 preps.	D5025
	200 preps.	D5026
	2 x 96 preps.	D5027
	2 x 96 preps.	D5028
METHYLATED/NON-METHYLATED DNA STANDARDS		
Universal Methylated DNA Standard	1 set	D5010
Universal Methylated Human DNA Standard	1 set	D5011
Universal Methylated Mouse DNA Standard	1 set	D5012
Human Methylated and Non-methylated DNA Set	1 set	D5014
Human HCT116 DKO Non-methylated DNA Standard	5 µg	D5014-1
Human HCT116 DKO Methylated DNA Standard	5 µg	D5014-2
Bisulfite Converted Universal Methylated Human DNA Standard	1 set	D5015
<i>E. coli</i> Non-methylated Genomic DNA	5 µg	D5016
AMPLIFICATION OF BISULFITE CONVERTED DNA		
Zymo Taq™ DNA Polymerase	50 rxns.	E2001
	200 rxns.	E2002
Zymo Taq™ PreMix (2X concentrated)	50 rxns.	E2003
	200 rxns.	E2004
ANTIBODIES & IMMUNOPRECIPITATION		
Methylated-DNA IP Kit	10 preps.	D5101
ChIP DNA Clean & Concentrator™	50 preps.	D5201
	50 preps.	D5205
Anti-5-Methylcytosine Monoclonal Antibody (clone 10G4)	50 µg	A3001-50
	200 µg	A3001-200
METHYLTRANSFERASES		
CpG Methylase (M.SssI)	200 U	E2010
	400 U	E2011
GpC Methylase (M.CviPI)	200 U	E2014
	1000 U	E2015
DNA FRAGMENTATION		
DNA Degradase™	500 U	E2016
	2000 U	E2017
DNA Degradase Plus™	250 U	E2020
	1000 U	E2021
DNA Shearase™	50 U	E2018-50
	200 U	E2018-200
	50 U & DCC™	E2019-50
	200 U & DCC™	E2019-200
NUCLEOSOME MAPPING		
EZ Nucleosomal DNA Prep Kit	20 preps	D5220
5-HYDROXYMETHYLCYTOSINE		
5-Hydroxymethylcytosine DNA	5 µg	D5400
5-Methylcytosine & 5-Hydroxymethylcytosine DNA Standard Set	1 set	D5405

Trademarks and Disclaimers:

™ Trademarks of Zymo Research Corporation.

This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility.

Integrity of kit components is guaranteed for up to one year from date of purchase. Reagents are routinely tested on a lot-to-lot basis to ensure they provide maximal performance and reliability.

For Technical Assistance, please contact 1-888-882-9682 or E-mail tech@zymoresearch.com. Satisfaction of all Zymo Research products is guaranteed. If you are not satisfied with this product please call 1-888-882-9682.

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