

# DNA Degradase™

Cat. Nos. E2016 (500 Units)  
E2017 (2,000 Units)

Storage: -20 °C



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

## Product Information

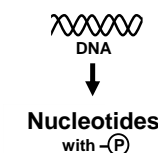
### Highlights:

- Quick and simple procedure for generating single nucleotides from DNA for quantitative analysis (e.g., whole-genome methylation analysis by HPLC, TLC, etc.)
- 1 hour, single-enzyme digest vs. conventional 6-16 hour multi-step enzyme digestion protocols.

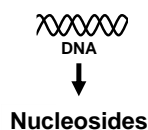
### Description:

DNA Degradase™ from Zymo Research is a nuclease mix that *quickly* and *efficiently* degrades DNA to its individual nucleotide components. DNA Degradase™ is ideal for whole-genome DNA methylation analysis by a number of downstream applications (i.e., HPLC, TLC, etc.). Digestion with the enzyme is performed via a one-step procedure that is faster and simpler than other available methods.

#### DNA Degradase™ [E2016] [E2017]      DNA Degradase Plus™ [E2020] [E2021]

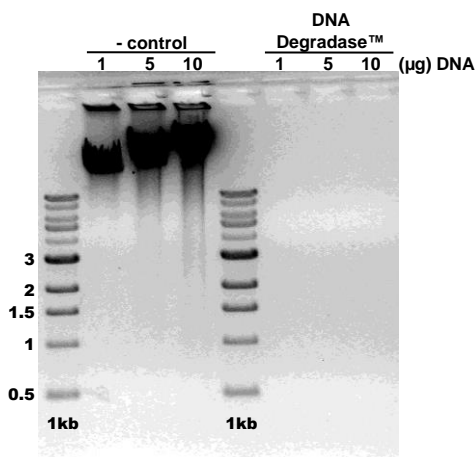


**Quantitation Applications** Thin layer chromatography HPLC



LC/Mass Spectrometry

DNA Degradase™ degrades DNA to individual nucleotides. Quantitation of nucleotides to detect DNA methylation levels can be assessed by various applications (e.g., TLC, HPLC, etc.). For detection of DNA methylation via LC/MS, DNA needs to be degraded down to individual nucleosides, see DNA Degradase Plus™ (cat nos. E2020, E2021).



**DNA Degradase™ Efficiently Degrades DNA:** 1 µg, 5 µg, and 10 µg of λ DNA incubated with 1 µl (10 U) of DNA Degradase™ in 25 µl reaction volume (see *Standard Reaction Setup*) and incubated at 37°C for 1 hour.

### Product Contents:

	Cat. No. E2016	Cat. No. E2017	Storage
DNA Degradase™	500 units	2,000 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:** 10 units/µl

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

**Reaction Conditions:** DNA Degradase™ 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™ 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™ (10 units/µl)  
19.5 µl ddH<sub>2</sub>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™ is sufficient to digest 1 µg of DNA 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).

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## Product Information

### Related Epigenetics Products:

Product Name	Size	Cat. No.
<b>BISULFITE TREATMENT OF DNA</b>		
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
<b>METHYLATED/NON-METHYLATED DNA STANDARDS</b>		
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
<b>AMPLIFICATION OF BISULFITE CONVERTED DNA</b>		
Zymo Taq™ DNA Polymerase	50 rxns.	E2001
	200 rxns.	E2002
Zymo Taq™ PreMix (2X concentrated)	50 rxns.	E2003
	200 rxns.	E2004
<b>ANTIBODIES &amp; IMMUNOPRECIPITATION</b>		
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
<b>METHYLTRANSFERASES</b>		
CpG Methylase (M.SssI)	200 U	E2010
	400 U	E2011
GpC Methylase (M.CviPI)	200 U	E2014
	1000 U	E2015
<b>DNA FRAGMENTATION</b>		
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
<b>NUCLEOSOME MAPPING</b>		
EZ Nucleosomal DNA Prep Kit	20 preps	D5220
<b>5-HYDROXYMETHYLCYTOSINE</b>		
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](mailto: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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