



Restriction Enzyme Dpn II



Cat.# FG-DpnII	Size 1,000 units	Conc. 10 units/μl
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Store at -20°C

Supplied with: 10X FastGene® Buffer Dpn II (FG-REBDpnII)
10X FastGene® FastCut Buffer (FG-REBHF)
6X DNA Loading Buffer
Sterile water

Recognition site



For Research Use Only. Not for use in diagnostic procedures.



Source: *Diplococcus pneumoniae* G41

Reaction conditions

1X FastGene® Buffer Dpn II 37°C
1X FastGene® FastCut Buffer, 37°C

FastGene® FastCut Buffer

FastGene® restriction enzyme can cut substrate DNA in 5-15 with FastGene® FastCut Buffer.

1X FastGene® Buffer Dpn II

50 mM Bis Tris-HCl (pH 6.0 at 25°C)
10 mM MgCl₂
100 mM NaCl
100 μg/ml BSA

Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1 μg bacteriophage λ (*dam* -) at 37°C for 1 hr in 50 μl reaction mixtures.

Quality control

- Unit definition assay
- Overdigestion assay
- Endonuclease assay
- Extreme pure assay

Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer Dpn II	1 X	5 μl
Dpn II	10 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® FastCut Buffer	1 X	5 μl
Dpn II	10 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37°C for 15 min

※ We recommend 5-10 units of enzyme per μg DNA and 10-20 units for genomic DNA in a 1 h digest.

Dilution buffer:

FastGene® Diluent B

Heat Inactivation

Dpn II can be inactivated at 65°C for 20 min.

Methylation sensitivity

dam methylation: sensitive
dcm methylation: Not sensitive
CpG methylation: Not sensitive

Prolonged incubation

A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.13 U.

Relative activity in FastGene® Buffers

FastGene® Buffer I:	25%
FastGene® Buffer II:	75%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	75%
FastGene® FastCut Buffer:	100%

Note

It is an isoschizomer of Mbo I. DNA cleavage is blocked by *dam* methylation.