

Product Description

Dpn I is a Type IIP restriction endonuclease expressed in *Escherichia coli* carrying the Dpn I gene cloned from *Diplococcus pneumoniae* (S. Lacks). Dpn I can only cut the DNA when the recognition site is methylated. Its recognition and cleavage sequences are shown below:

5'...GA^{m6} ↓ TC...3'

3'...CT ↑ A^{m6}G...5'

Components

Components	BR1G122-01 500 U	BR1G122-02 1,000 U	BR1G122-03 5,000 U
Dpn I (20 U/μL)	1×0.025 mL	1×0.05 mL	1×0.25 mL
10× Cut-Buffer	1×1 mL	1×1 mL	2×1 mL

Unit Definition

One unit of activity is defined as the amount of enzyme required to completely cleave 1 μg of pBR322 DNA (dam-methylated) within 1 hour at 37°C.

Storage

Store at -20±5°C.

Notes

1. For research use only. Not for use in clinical diagnosis.
2. Mix thoroughly before use. Avoid repeated freeze-thaw cycles.
3. The volume of restriction endonuclease added should not exceed one-tenth of the total reaction volume.
4. Scope of application: Digestion of genomic DNA and plasmid DNA, and removal of plasmid templates after PCR reactions.
5. Digestion for longer than 3 h is not recommended, as prolonged incubation may lead to star activity.

Prepare Reaction Mix

Prepare the reaction mix on ice as follows:

Components	Volume per Reaction	Concentration in Master Mix
10× Cut-Buffer	5 μL	1×
Dpn I (20 U/μL)	1 μL	0.4 U/μL
DNA Substrate	1 μg	—
ddH ₂ O	To 50 μL	—

Reaction Programme

Incubate at 37°C for 1 h. Heat inactivation: incubate at 80°C for 20 min.