BsaJI

1-800-632-7799
info@neb.com
www.neb.com

R0536S 0181210141O1

R0536S

1,000 units **5,000 U/ml** **Lot: 0181210**

RECOMBINANT **Store at –20°C** **Exp: 10/14**

Recognition Site:

5′. . . C▼CNNGG . . . 3′
3′. . . GGNNC▲C . . . 5′

Source: An *E. coli* strain that carries the cloned BsaJI gene from *Bacillus stearothermophilus* J695 (Z. Chen)

More Units, Now Recombinant, New Reaction Buffer

Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA, 0.1% Triton X-100 and 50% glycerol.

Reagents Supplied with Enzyme:
10X NEBuffer 4.

Reaction Conditions: 1X NEBuffer 4.
Incubate at 60°C.

1X NEBuffer 4:
50 mM potassium acetate
20 mM Tris-acetate
10 mM magnesium acetate
1 mM DTT
pH 7.9 @ 25°C

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA in 1 hour at 60°C in a total reaction volume of 50 µl.

Diluent Compatibility: Diluent Buffer A
50 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

Quality Control Assays

Ligation: After 10-fold overdigestion with BsaJI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5′ termini concentration of 1–2 µM) at 16°C. Of these ligated fragments, > 95% can be recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of λ DNA and 50 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.

Exonuclease Activity: Incubation of 50 units of enzyme with 1 µg sonicated ^{3}H DNA (10^{5} cpm/µg) for 4 hours at 60°C in 50 µl reaction buffer released < 0.1% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1	100%
NEBuffer 2	100%
NEBuffer 3	100%
NEBuffer 4	**100%**

When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

Survival in a Reaction: Suitable for an extended or overnight digestion. Enzyme is active > 8 hours.

Heat Inactivation: 80°C for 20 minutes.

Notes: BsaJI is an isoschizomer of SecI.

Not sensitive to *dam*, *dcm* or mammalian CpG methylation

Incubation at 37°C results in 20% activity.

CERTIFICATE OF ANALYSIS

BsaJI
1-800-632-7799
info@neb.com
www.neb.com
R0536S 0181210141O1
R0536S
1,000 units 5,000 U/ml Lot: 0181210
RECOMBINANT Store at –20°C Exp: 10/14
Recognition Site:
5′. . . C▼CNNGG . . . 3′
3′. . . GGNNC▲C . . . 5′
Source: An *E. coli* strain that carries the cloned BsaJI gene from *Bacillus stearothermophilus* J695 (Z. Chen)
More Units, Now Recombinant, New Reaction Buffer
Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA, 0.1% Triton X-100 and 50% glycerol.
Reagents Supplied with Enzyme:
10X NEBuffer 4.
Reaction Conditions: 1X NEBuffer 4.
Incubate at 60°C.
1X NEBuffer 4:
50 mM potassium acetate
20 mM Tris-acetate
10 mM magnesium acetate
1 mM DTT
pH 7.9 @ 25°C
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA in 1 hour at 60°C in a total reaction volume of 50 µl.
Diluent Compatibility: Diluent Buffer A
50 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).
Quality Control Assays
Ligation: After 10-fold overdigestion with BsaJI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5′ termini concentration of 1–2 µM) at 16°C. Of these ligated fragments, > 95% can be recut.
16-Hour Incubation: A 50 µl reaction containing 1 µg of λ DNA and 50 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.
Exonuclease Activity: Incubation of 50 units of enzyme with 1 µg sonicated ^{3}H DNA (10^{5} cpm/µg) for 4 hours at 60°C in 50 µl reaction buffer released < 0.1% radioactivity.
Enzyme Properties
Activity in NEBuffers:
NEBuffer 1 100%
NEBuffer 2 100%
NEBuffer 3 100%
NEBuffer 4 100%
When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.
Survival in a Reaction: Suitable for an extended or overnight digestion. Enzyme is active > 8 hours.
Heat Inactivation: 80°C for 20 minutes.
Notes: BsaJI is an isoschizomer of SecI.
Not sensitive to *dam*, *dcm* or mammalian CpG methylation
Incubation at 37°C results in 20% activity.
CERTIFICATE OF ANALYSIS