BsaHI

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

R0556S 008120814081

R0556S

BSA 37° dcm Yes NEB4

2,000 units **Lot: 0081208** **Exp: 8/14**

RECOMBINANT **10,000 U/ml** **Store at –20°C**

Recognition Site:

5′. . . G R▼C G Y C . . . 3′
3′. . . C Y G C▲R G . . . 5′

Single Letter Code: R = A or G, Y = C or T

Source: An *E. coli* strain that carries the cloned BsaHI gene from *Bacillus stearothermophilus* CPW11 (Z. Chen)

More Units, Now Recombinant

Supplied in: 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA and 50% glycerol.

Reagents Supplied with Enzyme:
10X NEBuffer 4, 100X BSA.

Reaction Conditions: 1X NEBuffer 4, supplemented with 100 µg/ml BSA. Incubate at 37°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 37°C in 50 µl of reaction buffer.

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

Quality Control Assays

Ligation: After 10-fold overdigestion with BsaHI, > 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 DNA and 100 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 100 units of enzyme with 1 µg sonicated ^{3}H DNA (10^{5} cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.2% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1	50%
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.

Note: BsaHI is an isoschizomer of AhaII.

Blocked by some combinations of overlapping *dcm* methylation. Cleavage of mammalian genomic DNA is blocked by CpG methylation.

Incubation of BsaHI at 60°C results in a 2-fold increase in activity.

Companion Products:
dam^{-}/dcm^{-} Competent *E. coli*

#C2925H	20 transformation reactions
#C2925I	24 transformation reactions

= Time-Saver™ Qualified (See www.neb.com for details).

CERTIFICATE OF ANALYSIS

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