



TaqI
Methyltransferase



M0219S 005160318031

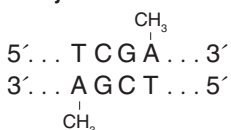
1-800-632-7799
info@neb.com
www.neb.com

CutSmart  RRI
SAM 65° No

M0219S

1,000 units 10,000 U/ml Lot: 0051603
RECOMBINANT Store at -20°C Exp: 3/18

Methylation Site:



Description: *TaqI* Methyltransferase modifies the adenine residue (N⁶) in the sequence above.

Source: An *E. coli* strain that carries the cloned *TaqI* modification gene from *Thermus aquaticus*

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

Reagents Supplied with Enzyme:

10X CutSmart® Buffer, 400X S-adenosylmethionine (32 mM).

Reaction Conditions: 1X CutSmart Buffer and 80 µM S-adenosylmethionine (supplied). **Incubate at 65°C.**

1X CutSmart Buffer:

50mM Potassium Acetate
20mM Tris-acetate
10mM Magnesium Acetate
100µg/ml BSA
pH 7.9@25°C

Protection Assay Conditions: *TaqI* Methyltransferase

is incubated with 1 µg λ DNA in 20 µl 1X CutSmart Buffer and 80 µM S-adenosylmethionine, for 1 hour at 65°C. The extent of protection by *TaqI* Methyltransferase is determined by the addition of 30 µl 1X CutSmart Buffer and 10 units of *TaqI* restriction endonuclease. Incubation for 15 minutes at 65°C is followed by analysis on an agarose gel.

Unit Definition: One unit is defined as the amount of enzyme required to protect 1 µg of λ DNA in 1 hour at 65°C in a total reaction volume of 20 µl against cleavage by *TaqI* restriction endonuclease.

Quality Control Assays

16-Hour Incubation: Incubation of 600 units of *TaqI* Methyltransferase with 1 µg of BstEII digested λ DNA in 50 µl NEBuffer 2 at 65°C resulted in no detectable endonuclease contamination.

Exonuclease Activity: Incubation of 600 units of *TaqI* Methyltransferase with 1 µg sonicated ³H DNA (10⁵ cpm/µg) for 4 hours at 65°C in 50 µl NEBuffer 2 [50 mM NaCl, 10 mM Tris-HCl (pH 7.9 @ 25°C), 10 mM MgCl₂, 1 mM dithiothreitol] released < 0.1% of the total radioactivity.

Storage of SAM: S-adenosylmethionine (SAM) is stored at -20°C as a 32 mM solution dissolved in 0.005 M sulfuric acid and 10% ethanol. Under these conditions SAM is stable for up to 6 months. SAM is unstable at (pH 7.5), 37°C (1) and should be replenished in reactions incubated longer than 4 hours.

Methylation can be optimized by using fresh SAM.

Note: *TaqI* Methyltransferase gives 25% activity at 37°C.

Reference:

- Hoffman, J.L. (1986) *Biochemistry* 25, 4444-4449.

Companion Product:

S-adenosylmethionine (SAM)
#B9003S 0.5 ml




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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.


CERTIFICATE OF ANALYSIS

TaqI
Methyltransferase



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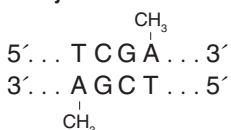
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