

CviQI



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R0639S 005120814081

R0639S



2,000 units 10,000 U/ml Lot: 0051208

RECOMBINANT Store at -20°C Exp: 8/14

Recognition Site:

5'...GTAC...3'
3'...CATG...5'

Source: An *E.coli* strain that carries the cloned CviQI gene from *Chlorella* virus NC64A (NY-2A) (J.L.Van Etten).

New Diluent Buffer

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New Diluent Buffer

Supplied in: 200 mM NaCl, 20 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA, 0.15% Triton X-100 and 50% glycerol.

Reagents Supplied with Enzyme:

10X NEBuffer 3, 100X BSA.

Reaction Conditions: 1X NEBuffer 3, supplemented with 100 µg/ml BSA. Incubate at 25°C.

1X NEBuffer 3:

100 mM NaCl
50 mM Tris-HCl
10 mM MgCl₂
1 mM dithiothreitol
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 25°C in a total reaction volume of 50 µl.

Diluent Compatibility:

Diluent Buffer C
250 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA,
1 mM dithiothreitol, 0.15% Triton X-100, 200 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

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Quality Control Assays

Ligation: After 5-fold overdigestion with CviQI, approximately 75% 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 20 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 a 50 µl reaction containing 50 units of CviQI with 1 µg of a mixture of single and double-stranded [³H] *E. coli* DNA (10⁵ cpm/µg) for 4 hours at RT released < 0.1% of the total radioactivity.

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Enzyme Properties

Activity in NEBuffers:

NEBuffer 1	75%
NEBuffer 2	100%
NEBuffer 3	100%
NEBuffer 4	75%

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: A minimum of 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: No

Notes: CviQI is an isoschizomer of RsaI.

CviQI exhibits only 10% activity at 37°C.

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

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



CERTIFICATE OF ANALYSIS

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