



## Nt.BbvCI, Nicking Endonuclease

**Catalogue number:** MB09401, 1000 U  
MB09402, 5000 U

5'...CC↓TCAGC...3'  
3'...GG AGTCG...5'

**Description:** Nt.BbvCI is a Nicking Endonuclease purified from an *Escherichia coli* strain that carries the BbvCI fragment from *Brevibacillus brevis* (*Bacillus brevis*). The enzyme cleaves only one strand of DNA on a double-stranded DNA substrate. Nt.BbvCI activity is blocked by some combinations of overlapping CpG methylation. NZYTech provides Nt.BbvCI with a specific reaction buffer. NZYTech's Nt.BbvCI Nicking Endonuclease is an enzyme that acts at 37 °C.

**Concentration:** 10000 U/mL.

**Unit definition:** One unit is defined as the amount of this enzyme required to digest completely 1 µg of plasmid DNA in 50 µL of the reaction mixture at 37 °C for one hour.

**Reagents supplied with the enzyme:**  
10× Nt.BbvCI Buffer.

**Storage buffer:** 10 mM Tris-HCl, pH 7.4, 50 mM KCl, 1 mM Dithiothreitol, 0.1 mM EDTA, 0.2 mg/mL BSA, 50% (v/v) glycerol.

**Reaction buffer (10×):** 500 mM Potassium acetate, 20 mM Tris-acetate, 10 mM magnesium acetate, 1 mM Dithiothreitol, pH 7.9 at 25 °C.

### General reaction mixture:

Nt.BbvCI	1 µL
10× Nt.BbvCI Buffer	2 µL
Substrate DNA	≤ 1 µg
Sterilized ultrapure water	up to 20 µL

**Incubation temperature:** 37 °C for one hour.

**Heat inactivation:** 80 °C for 20 minutes.

### Quality control:

**Purity:** Nt.BbvCI has been determined to be >90% pure as judged by SDS-PAGE followed by Coomassie Blue staining.

**DNases assay:** 10 U of Nt.BbvCI were incubated with 0.2-0.3 µg of a proprietary plasmid for 14-16 hours at 37 °C. No nicking activity was observed at agarose gel electrophoresis.

**Functional assay:** Nt.BbvCI was tested for performance in a digestion of 0.2-0.3 µg of a proprietary plasmid using 10 U of enzyme. The resulting digestion was visualized in an agarose gel.

**Storage conditions:** Nt.BbvCI should be stored at -20 °C at all times. Do not keep it on ice while working at the bench.

**Shipping conditions:** Dry ice.

**Product life:** Please see the product labels.

### Certificate of Analysis

Assay	Result
Protein purity	Pass
DNases assay	Pass
Functional assay	Pass

Approved by:



José Prates  
Senior Manager, Quality Systems

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