TaqII

5'-G A C C G A $(N)_{11}$-3'
3'-C T G G C T $(N)_9$-5'

Cat. No.	Size
E2411-01	100 units
E2411-02	500 units

Reaction Temperature: 65°C

Inactivation Temperature (20 min): --

Prototype: TaqII

Source: *Thermus aquaticus*
Note 1: Purified from *E.coli* strain that carries the cloned *taqRII* gene from *Thermus aquaticus**.
** patent pending*

Package Contents:
- **TaqII**
- **10x Reaction Buffer TaqII**
- **Dilution Buffer**
  (= TaqII Storage Buffer)
  Added for enzymes exceeding 10 U/µl in concentration. High protein concentration warrants optimal stability during prolonged storage. Use dilution buffer to prepare short term working stocks (5-10 U/µl, non-freezing at -20°C).

Storage Conditions: Store at -20°C

Double Digestion – Buffer Compatibility:

Buffer	% Rel. Activity
Low	NR***
Medium	NR***
High	NR***
Acet	NR***

*** NR - buffer is not recommended, use 1 x buffer TaqII.

Recommended Buffer: TaqII
(or compatible third party buffers)

DNA Methylation:
No inhibition: dam, dcm, EcoKI
Potential inhibition: CpG

Standard Reaction Protocol:

Mix the following reaction components:
1-2 µg pure DNA or 10 µl PCR product (=~0.1-2 µg DNA)
3 µl 10x Buffer TaqII
1 U TaqII (use 1 U / µg DNA, < 10 % React. Volume!)
Tips: Add enzyme as last component. Mix components well before adding enzyme. After enzyme addition, mix gently by pipetting. Do not vortex. High (excess) amounts of enzyme can greatly speed up the reaction.
@ 30 µl H_2O, nuclease free

Incubate for 3 h at 65°C

Stop reaction by alternatively
(a) Addition of 1.2 µl EDTA pH 8.0 [0.5 M], final 20 mM *or*
(b) Heat Inactivation
(not applicable for this enzyme) *or*
(c) Spin Column DNA Purification
(e.g. EURx PCR/DNA CleanUp Kit, Cat.No. E3520) *or*
(d) Gel Electrophoresis and Single Band Excision
(e.g. EURx AgaroseOut DNA Kit, Cat.No. E3540) *or*
(e) Phenol-Chloroform Extraction or Ethanol Precipitation.

Note 1: It is required to purify DNA before digestion. We recommend PCR / DNA Clean-Up Purification Kit or Agarose-Out DNA Purification Kit.
Note 2: It is not recommended to use more than 1 unit of enzyme per 1 µg of DNA.
Note 3: Over 1 hr digestion is highly recommended. Best results are obtained with 3 hr digestion.

Unit Definition:

One unit is the amount of enzyme required to digest 1 µg of pBR322 DNA to obtain stable digestion pattern in 1 hr in a total reaction volume of 30 µl. Enzyme activity was determined in the recommended reaction buffer.

Reaction Buffer:

1 x TaqII Buffer: 50 mM Tris-HCl (pH 8.5 at 25°C), 10 mM $MgCl_2$, 1 mM dithiothreitol.

Storage Buffer:

20 mM Tris-HCl (pH 7.5 at 25°C), 0.1 mM EDTA, 200 mM NaCl, 1 mM dithiothreitol, 200 µg/ml bovine serum albumin, 0.02 % Triton™X-100, 0.02 % Tween™20, 50 % (v/v) glycerol.

Quality Control:

All preparations are assayed for contaminating endonuclease, 3'-exonuclease, 5'-exonuclease/5'-phosphatase, as well as nonspecific single- and double-stranded DNase activities.