Restriction Endonuclease

SibEnzyme®

AsiG I

Recognition Sequence:

A↓CCGGT
TGGCC↑A

L

E236T

500 units

5,000 u/ml

Lot: 11

Exp: 09/20

Store at -20°C

SE-Buffers	B	G	O	W	Y	ROSE
%Activity	10-25	25-50	100	75-100	10-25	75

37°C | 65°C | O | λ | TURBO

For more details scan the code

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CERTIFICATE OF ANALYSIS

Description: Turbo AsiG I can be used for short time (10-15 min) DNA digestion as well as for standard reaction. The reaction can be performed using optimal or universal (ROSE) Buffer. Buffer ROSE is perfect for double digestion.

Source: *Arthrobacter species G*

Supplied in: 10 mM Tris-HCl (pH 7.5), 250 mM NaCl, 0.1 mM EDTA, 7 mM 2-mercaptoethanol, 100 µg/ml BSA, 50% glycerol.

Reaction Conditions:
1 x SE-Buffer O or 1 x SE-Buffer ROSE.
Incubate at 37°C.

1 x SE-Buffer O (pH 7.6@ 25°):
50 mM Tris-HCl 100 mM NaCl
10 mM $MgCl_2$ 1 mM DTT

Heat Inactivation: Enzyme is inactivated by incubation at 65°C for 20 minutes.

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 a total reaction volume of 50 µl.

Quality Control Assays
Ligation: After 5-fold overdigestion with AsiG I, 90% of the DNA fragments can be ligated with T4 DNA Ligase and recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 10 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour.

Oligonucleotide Assay: No detectable degradation of a single-stranded and double-stranded oligonucleotide was observed after incubation with 5 units of restriction endonuclease for 3 hours.

Reagents Supplied with Enzyme:
10 x SE-Buffer O, 10 x SE-Buffer ROSE.

Turbo DNA Digestion:
Applications:
-Fast DNA analysis
-Fast preparation of vectors for cloning
-Double digestion
Enzyme Properties:
1 µl of Turbo AsiG I cuts 1 µg of DNA in 1 x SE-Buffer O or universal 1 x SE-Buffer ROSE in 10-15 min (see the protocol below). Short time DNA digestion requires high quality purification of DNA sample. This enzyme can digest DNA at standard incubation time (1-16 hours) as well.

Turbo reaction protocol:
20 µl of the reaction volume:
Reaction Buffer (x10) - 2 µl
Plasmid DNA - 1-2 µl (up to 1 µg) or
PCR product - 5-10 µl (~0,2 µg)
Sterile water - up to 20 µl
+ 1 µl of Turbo Restriction Endonuclease
Incubate at 37°C for 10-15 min.