

Taq MutS

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|----------------------------|--------------------------|
| Code No. | 316-04011 |
| Size | 50 µg |
| Concentration | 1 µg/µl |
| Molecular Weight | 89.3 kDa |
| Source | <i>Thermus aquaticus</i> |
| Storage Temperature | -20°C |

Storage Condition

100 mM NaCl, 20 mM Tris-HCl (pH 7.5), 0.1 mM EDTA,
1 mM DTT, 50% Glycerol

Enzyme Reaction Condition

100 mM KCl, 50 mM Tris-HCl (pH 8.5 at 25°C), 20 mM
MgCl₂, 0.1 mM EDTA, 1 mM DTT, 2% Glycerol
Reaction Temperature: 65°C

■ The attached exclusive buffer for the enzyme
reaction (**Store at -20°C**)

• 10 × Taq MutS Buffer 1 ml

It is 10-fold concentrated compared to the
enzyme reaction condition.

Binding test:

In 20 µl of the reaction solution, 0.5 µg of the
product can bind to not less than 50% of 100 ng
of a 36 bp synthetic DNA having 1 base deletion
at 65°C for 30 min.

Purity:

Three µg of the product and 0.5 µg of plasmid
pBR322 were reacted at 37°C for 16 hr and then
agarose gel (0.8% Agarose S) electrophoresis
was performed. The result indicated no
increase of oc-DNA.

Three µg of the product and 0.5 µg of λDNA
were reacted at 37°C for 16 hr and then agarose
gel (0.8% Agarose S) electrophoresis was
performed. The result indicated no degradation
of λDNA.

Three µg of the product and 2 µg of substrate
RNA were reacted at 37°C for 16 hr and then
agarose gel (2% Agarose S) electrophoresis was
performed. The result indicated no degradation
of RNA.

References

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- 5) Lishanski, A., Ostrander, E. A. and Rine, J.:
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Example of use

Test for detecting the deleted region using PCR products

A plasmid having a mutated sequence (M: mutant) in which 2 nucleotides are deleted as compared to the normal sequence (N: normal) was produced. Respective PCRs were performed using N or M singly, or a mixture of N and M as templates. After completing PCR, the samples were denatured and annealed, and reacted by directly adding *Taq* MutS (1 µg) at 65 °C for 30 min, and then subjected to electrophoresis. PCR was performed so that the lengths of the amplified products were 3 kinds of 60 bp, 100 bp and 200 bp, and the deleted region was detected in each of the products.

| | |
|---------------------------------------|---------|
| Template DNA (N/M, N or M) | 1 µl |
| 10 × Gene <i>Taq</i> Universal Buffer | 5 µl |
| dNTP Mixture (2.5 mmol/l each) | 4 µl |
| Primer-forward (20 pmol/µl) | 1 µl |
| Primer-reverse (20 pmol/µl) | 1 µl |
| Gene <i>Taq</i> (5 units/µl) | 0.5 µl |
| H ₂ O | 37.5 µl |
| <hr/> | |
| Total | 50 µl |

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| | | |
|------|---------------------------------------|-------------|
| 94°C | 1 min. | } 25 cycles |
| 94°C | 10 sec. | |
| 60°C | 15 sec. | |
| 72°C | 20 sec. | |
| 94°C | 5 min. (denaturation of PCR products) | |
| 72°C | 30 min. (re-annealing) | |
| 4°C | | |

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 PCR products 10 µl + *Taq* MutS 1 µl (1 µg/µl)

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 65°C, 30 min.

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 + 2 µl Loading buffer
 (0.02% Bromophenol blue, 0.02% Xylene cyanol FF,
 50% Glycerol, 200 mM Tris-HCl pH 7.5)

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 Electrophoresis in polyacrylamide gradient gel

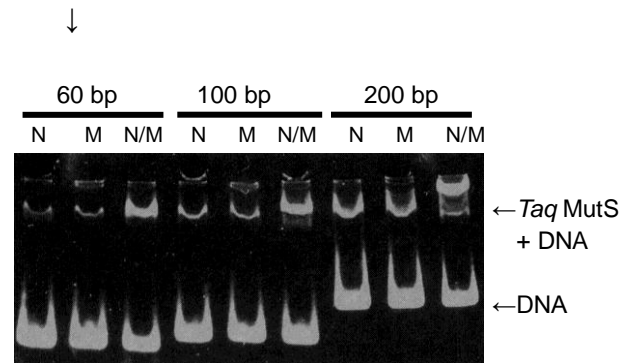
Polyacrylamide gradient gel

- 4–10% native polyacrylamide
- 1 × TAE
- 0.1 mM MgCl₂

Electrophoresis Running buffer

- 1 × TAE
- 0.1 mM MgCl₂

↓
 Stain the gel with SYBR® Gold



(For more details on experimental examples and the like, see the website of Nippon Gene.)

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This product is sold as a reagent (for research) and is not for pharmaceutical use.