Thermo SCIENTIFIC

PRODUCT INFORMATION

MuA Transposase

#F-750 4.4 µg
Lot: _ Expiry Date: _

Concentration: 0.22 µg/µl

Store at -20°C

37

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Description: MuA Transposase is a single purified polypeptide that catalyzes the *in vitro* transposition reaction.

Source: An *E. coli* strain that carries the cloned MuA gene from bacteriophage Mu.

Storage buffer: 25 mM HEPES, pH 7.6, 0.1mM EDTA, 2 mM DTT, 300 mM KCl, 50 % glycerol.

Assay buffer for exonuclease and endonuclease reactions: 10 mM Tris-HCl, pH 7.9 at 25°C, 10 mM $MgCl_2$, 50 mM NaCl, 1 mM DTT.

Concentration was determined spectrophotometrically using the formula: 1.58 OD_{280} units = 1.0 mg/ml.

Exonuclease Activity: Incubation of 2.2 µg of MuA Transposase (4 h, 30°C, 50 µl) with 1 µg of sonicated ^3H DNA ($3x10^5$ cpm/µg) in the assay buffer released <0.5 % of radioactivity.

Endonuclease Contamination: Incubation of 2.2 µg of MuA Transposase (4 h, 30°C, 50 µl) with 1 µg ϕX174 RFI DNA in the assay buffer gave <5 % conversion to RFII.

16-hour Incubation: Incubation of 2.2 µg of MuA Transposase (16 h, 30°C, 50 µl) with 1 µg of lambda DNA - HindIII digest in the assay buffer resulted in an intact pattern of DNA bands.

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53

MuA Transposition Reaction/ Transformation Assay

Transposition reactions (20 µl) were performed using 20 ng of the Entranceposon (Cam^R) (IF-751), 370 ng of the Control Target DNA (9243 bp) and 0.22 µg of the MuA Transposase in 1X reaction buffer (25 mM Tris-HCl pH 8.0 at 20°C; 10 mM $MgCl_2$; 110 mM NaCl; 0.05 % Triton X-100; 10 % glycerol). The reaction mixtures were incubated for 1 h at 30°C followed by heat-inactivation of the MuA Transposase for 10 min at 75°C. 10 µl of transposition reactions were transformed into chemically competent *E.coli* XL1 Blue cells using standard protocol (transformation efficiency $<10^7$ cfu/µg pUC19). Dilutions of the transformation mixture were plated on LB plates supplemented with 100 µg/ml ampicillin and 20 µg/ml chloramphenicol. As a result more than thousand chloramphenicol resistant colonies were recovered per single transposition reaction.

Technical support

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PRODUCT USE LIMITATION

This product has been developed and is sold exclusively for research purposes and in vitro use only. This product has not been tested for use in diagnostics or drug development, nor are they suitable for administration to humans or animals.