NEW ENGLAND Biolabs®

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New England Biolabs
Product Specification

Product Name:	*SmlI*
Catalog #:	*R0597S/L/V*
Concentration:	*10,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 55°C in a total reaction volume of 50 µl.*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 400 µg/ml BSA*
Specification Version:	*PS-R0597S/L v1.0*
Effective Date:	*07/22/2013*

Assay Name/Specification (minimum release criteria)
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA and a minimum of 50 units of SmlI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.
Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with SmlI, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with SmlI.
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 30 units of SmlI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Date 07/22/2013

Derek Robinson
Quality Approver