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New England Biolabs
Certificate of Analysis

Product Name:	*SwaI*
Catalog #:	*R0604S/L*
Concentration:	*10,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of pUPS DNA in 1 hour at 25°C in a total reaction volume of 50 µl.*
Lot #:	*0031603*
Assay Date:	*03/2016*
Expiration Date:	*3/2018*
Storage Temp:	*-20°C*
Storage Conditions:	*400 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*
Specification Version:	*PS-R0604S/L v1.0*
Effective Date:	*08 Jul 2013*

Assay Name/Specification (minimum release criteria)	**Lot #0031603**
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA and a minimum of 100 units of SwaI incubated for 4 hours at 25°C releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) - After a 20-fold over-digestion of pUPS DNA with SwaI, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with SwaI.	**Pass**
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 3.1 containing 1 µg of pUPS DNA and a minimum of 100 Units of SwaI incubated for 16 hours at 25°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

* *The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.*

Authorized by
Derek Robinson
08 Jul 2013

Inspected by
Penghua Zhang
25 Mar 2016

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices