

New England Biolabs Certificate of Analysis

Product Name: *Swal*
Catalog Number: *R0604S*
Concentration: *10,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 25°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10135996*
Expiration Date: *07/2023*
Storage Temperature: *-20°C*
Storage Conditions: *10 mM Tris-HCl, 400 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)*
Specification Version: *PS-R0604S/L/V v3.0*

Swal Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0604SVIAL	Swal	10115115	Pass
B6003SVIAL	NEBuffer™ r3.1	10126635	Pass

Assay Name/Specification	Lot # 10135996
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of Swal incubated for 4 hours at 25°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of pXba DNA and a minimum of 100 units of Swal incubated for 16 hours at 25°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 1 µl of Swal is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p>	Pass
<p>Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of pXba DNA and 1 µl of Swal incubated for 15 minutes at 25°C results in complete digestion as determined by</p>	Pass

Assay Name/Specification	Lot # 10135996
agarose gel electrophoresis. Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pXba-NdeI DNA with Swal, ~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 Swal.	Pass

This product has been tested and shown to be in compliance with all specifications.

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Penghua Zhang
Production Scientist
02 Feb 2022



Michael Tonello
Packaging Quality Control Inspector
02 Feb 2022