

## 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.*  
**Lot Number:** *10020623*  
**Expiration Date:** *08/2020*  
**Storage Temperature:** *-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 v2.0*

Swal Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0604SVIAL	Swal	10020226	Pass
B7203SVIAL	NEBuffer™ 3.1	10018441	Pass

Assay Name/Specification	Lot # 10020623
<b>Ligation and Recutting (Terminal Integrity)</b> 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
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] 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.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 3.1 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.	Pass

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



Tony Spear-Alfonso  
Production Scientist  
21 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
28 Aug 2018