

New England Biolabs Certificate of Analysis

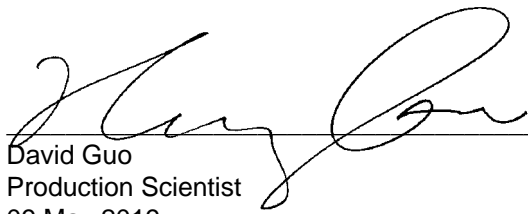
Product Name: *SpeI*
Catalog Number: *R0133L*
Concentration: *10,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of pXba-XbaI DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Lot Number: *10046238*
Expiration Date: *05/2021*
Storage Temperature: *-20°C*
Storage Conditions: *250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton® X-100, 200 µg/ml BSA*
Specification Version: *PS-R0133S/L v2.0*

Spel Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0133LVIAL	Spel	10046239	Pass
B7204SVIAL	CutSmart® Buffer	10043912	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043348	Pass

Assay Name/Specification	Lot # 10046238
Blue-White Screening (Terminal Integrity) A sample of LITMUS28 vector linearized with a 10-fold excess of SpeI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of SpeI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
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 SpeI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of T7 DNA with SpeI, >95% of the DNA fragments can be	Pass

Assay Name/Specification	Lot # 10046238
ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with SpeI.	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pXba-XbaI digested DNA and a minimum of 50 units of SpeI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) SpeI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	Pass

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



David Guo
Production Scientist
09 May 2019



Michael Tonello
Packaging Quality Control Inspector
11 Jun 2019