

New England Biolabs Certificate of Analysis

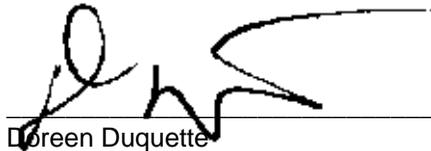
Product Name: EnGen® Spy dCas9 (SNAP-tag)
Catalog Number: M0652T
Concentration: 20 µM
Unit Definition: N/A
Lot Number: 10052801
Expiration Date: 08/2021
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl , 300 mM NaCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0652T v1.0

EnGen® Spy dCas9 (SNAP-tag) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0652TVIAL	EnGen® Spy dCas9 (SNAP-tag®)	10052799	Pass
B7203SVIAL	NEBuffer™ 3.1	10052508	Pass

Assay Name/Specification	Lot # 10052801
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 1 pmol of EnGen® Spy dCas9 (SNAP-tag®) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) EnGen® Spy dCas9 (SNAP-tag®) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Functional Testing (EnGen® Spy dCas9 (SNAP-tag®), Gel Shift Assay) A 20 µl reaction in 1X NEBuffer 3.1 containing 20 nM 100 bp FAM labeled double stranded target DNA, 20 nM TAMRA-labeled off target DNA, 100 nM sgRNA and 100 nM EnGen® Spy dCas9 (SNAP-tag®) incubated for 15 minutes at 37°C results in ≥90% binding of the substrate DNA as determined by electrophoretic mobility shift assay.	Pass
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 1 pmol of EnGen® Spy dCas9 (SNAP-tag®) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass

Assay Name/Specification	Lot # 10052801
<p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 pmol of EnGen[®] Spy dCas9 (SNAP-tag[®]) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 1 pmol of EnGen[®] Spy dCas9 (SNAP-tag[®]) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass

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



Doreen Duquette
Production Scientist
12 Aug 2019



Michael Tonello
Packaging Quality Control Inspector
13 Sep 2019