

New England Biolabs Certificate of Analysis

Product Name: EnGen[®] Spy dCas9 (SNAP-tag)
Catalog Number: M0652T
Concentration: 20 µM
Unit Definition: N/A
Packaging Lot Number: 10059004
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	10053972	Pass


Assay Name/Specification	Lot # 10059004
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.	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
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
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	Pass

Assay Name/Specification	Lot # 10059004
<p>pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	
<p>Protein Purity Assay (SDS-PAGE) EnGen[®] Spy dCas9 (SNAP-tag[®]) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<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

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



Jessica Cane
Production Scientist
30 Aug 2019



Michael Tonello
Packaging Quality Control Inspector
20 Nov 2019