240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

New England Biolabs Certificate of Analysis

Product Name: Q5® Site-Directed Mutagenesis Kit

Catalog Number: E0554S
Packaging Lot Number: 10223091
Expiration Date: 12/2024

Storage Temperature: Multi-temperature*
Specification Version: PS-E0554S v2.0

^{*} This product contains components with different storage temperature requirements. Please reference the applicable product specification document(s) on the Quality and Safety tab located on the product page of www.neb.com.

Q5® Site-Directed Mutagenesis Kit Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
S0554AVIAL	Control SDM Primer Mix	10186586	Pass	
N3041AVIAL	pUC19 Vector	10212040	Pass	
N0554AVIAL	Control SDM Plasmid	10186587	Pass	
M0554AVIAL	KLD Enzyme Mix	10186788	Pass	
M0494AVIAL	Q5® Hot Start High-Fidelity 2X Master Mix	10186578	Pass	
C2987HVIAL	NEB® 5-alpha Competent E. coli (High Efficiency)	10205599	Pass	
B9020SVIAL	SOC Outgrowth Medium	10202673	Pass	
B0554AVIAL	KLD Reaction Buffer	10162365	Pass	

Assay Name/Specification	Lot # 10223091
* Individual Product Component Note	Pass
Standard Quality Control Tests are performed for each component included in Q5	
Site-Directed Mutagenesis Kit and meet the designated specifications.	
Functional Testing (Mutagenesis Kit)	Pass
A 10 µl reaction containing 1 µl of PCR product (10 ng of Control SDM plasmid,	
amplified with Control SDM Primer Mix, with 25 cycles in Q5 Hot Start High-Fidelity	
Master Mix), 1 μl 10X KLD Enzyme Mix, 5 μl 2X KLD Reaction Buffer and 3 μl of	
nuclease-free water for 5 minutes at room temperature yields >50 colonies with >75%	
blue after transforming 5 µl into 50 µl NEB 5-alpha Chemically Competent Cells and	
making a 40-fold dilution prior to plating.	

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



E0554S / Lot: 10223091

Page 1 of 2

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Lixin An

Production Scientist

29 Sep 2023

Anna Sorensen

Packaging Quality Control Inspector

17 Jan 2024



E0554S / Lot: 10223091

Page 2 of 2