

## New England Biolabs Product Specification

*Product Name:* Q5<sup>®</sup> Site-Directed Mutagenesis Kit (Without Competent Cells)  
*Catalog #:* E0552S  
*Kit Components:* Q5<sup>®</sup> Hot Start High-Fidelity 2X Master Mix (M0494)  
KLD Enzyme Mix (M0554)  
KLD Reaction Buffer (B0554)  
Control SDM Primer Mix (S0554)  
Control SDM Plasmid (N0554)  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Specification Version:* PS-E0552S v1.0  
*Effective Date:* 13 Feb 2018

### Assay Name/Specification (minimum release criteria)

**Functional Testing (Mutagenesis Kit)** - 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.

\* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in Q5 Site-Directed Mutagenesis Kit (Without Competent Cells) and meet the designated specifications.



Date 13 Feb 2018

Derek Robinson  
Director of Quality Control

