***Product Specifications*** *P7610L Rev B*

| Product Information | |
|---|---|
| **2X VeraSeq PCR Mix** | |
| **Part Number** | P7610L |
| **Concentration** | 2X |
| **Unit Size** | 250 Reactions |
| **Storage Temperature** | -25°C to -15°C |
| **Lot Number** | |

*Biozym Art. Nr.: 280091*

**Product Description:** VeraSeq PCR Mix is a premixed, ready-to-use 2X solution containing VeraSeq 2.0 High-Fidelity DNA Polymerase, dNTPS, $MgCl_2$ and reaction buffer at optimal concentrations to maximize the speed, accuracy, and length of DNA synthesis. It is formulated to provide efficient, high-fidelity DNA amplification for Next Generation Sequencing library preparation, cloning, and synthetic biology applications.

| Product Specifications | |
|---|---|
| **Assay** | **PCR Amplification Assay** |
| **Specification** | Amplification of 500bp fragment from Genomic DNA |

**Source of Protein:** Purified from strain a recombinant strain of *E. coli* carrying the engineered VeraSeq 2.0 gene.

**Quality Control Analysis:**

**Functionality of 2X VeraSeq PCR Mix** is assessed by its ability to amplify a 500bp fragment from genomic DNA. Following PCR the 500bp fragment was visualized by Agarose gel electrophoresis.

**Contamination Tests:**
VeraSeq was tested prior to assembly and found free of contaminating endonucleases. Enzyme purity was >99% as determined by SDS-PAGE and negligible E.coli genomic DNA contamination was confirmed by qPCR. Specific activity was verified pre and post dilution.

# 2X VeraSeq PCR Mix
# Instructions for Use

## Common Applications

Ideal choice for applications requiring high fidelity DNA amplification such as cloning, next generation sequencing, and synthetic biology.

## Suggested Protocol

General precautions should be taken when setting up a PCR, including setting up the reaction on ice, adding master mix last, gently pipetting, thorough mixing and a quick centrifugation. The following procedure can be used as a guideline. Reactions may need to be optimized individually.

Reaction setup (for 50µL)*

| Component | Volume (µL) | Final Concentration |
|---|---|---|
| Sterile $H_2O$ | 20 – x | |
| 2X VeraSeq PCR Mix | 25 | 1X |
| PCR Primer Cocktail | 5 | 0.5 µM each |
| Library DNA* | X | |

* Total reaction volumes of library DNA and water should be adjusted to achieve a final reaction volume of 50µL. If the reaction volume needs to be >50µL, the volume of the 2X Master Mix should be adjusted so that it constitutes 50% of the final reaction volume.

Typical cycling conditions **

| Step | Temperature | Time | Cycles |
|---|---|---|---|
| Initial Denaturation | 98°C | 30 s | 1 |
| Denaturation<br>Annealing<br>Extension | 98°C<br>60°C<br>72°C | 10 s<br>30 s<br>30 s | TBD by User Δ |
| Final Extension | 72°C<br>4°C | 300 s<br>hold | 1 |

** Cycling conditions may need to be optimized, depending on the amplicon of interest.

Δ Number of cycles is dependent on the amount of input DNA and other specific sequence analysis requirements.