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

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, 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, thoroughly 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 Annealing Extension	98°C 60°C 72°C	10 s 30 s 30 s	TBD by User Δ
Final Extension	72°C 4°C	300 s 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.