Product Information	
Twist Library Preparation Kit 1 - 16 Rxn	
QIAGEN Part Number	CMK0016
Twist P/N	100253
Unit Size	16 reactions
Storage Temperature	-25˚C to -15˚C
Twist Lot Number	3200000212
Twist Expiry Date	07/31/2022
Kit Manufacturing Date	03/02/2021
Reference Number	66177113

Product Description:
Twist Library Preparation Kit 1

Kit Components						
Description	**QIAGEN P/N**	**QIAGEN Lot Number**	**QIAGEN Expiry**	**Twist P/N**	**Twist Lot Number**	**Twist Expiry**
5x Fragmentation Enzyme	Y9410C-2	020421R	08/2022	100261	3200000207	08/2022
10x Fragmentation Buffer	B0330C-2	021921	07/2022	100262	3200000208	07/2022
DNA Ligation Mix	L6030C-9	86021021	01/2023	100263	3200000209	01/2023
DNA Ligation Buffer	B9020C-4	122820	12/2023	100264	3200000210	12/2023
Amplification Primers, ILMN	CM0171C-2	N/A	N/A	100220	3200000223	02/2023

Product Specifications						
L6030						
Assay	**SDS Purity**	**Specific Activity**	**SS Exonuclease**	**DS Exonuclease**	**DS Endonuclease**	**E. coli DNA Contamination**
Units Tested	**n/a**	**n/a**	**6,000 U**	**6,000 U**	**6,000 U**	**6,000 U**
Specification	**>99%**	**300,000 U/mg**	**< 1.0 % Released**	**< 1.0 % Released**	**No Conversion**	**< 10 copies**

Quality Control Analysis:

Enzyme components were tested prior to assembly and found free of contaminating endonucleases and exonucleases. Enzyme purity was >95% as determined by SDS-PAGE and negligible *E.coli* genomic DNA contamination was confirmed by qPCR. Specific activity was verified for each enzyme.

L6030:

Unit Activity is measured using a 2-fold serial dilution method. Dilutions of enzyme batch were made in 1X DNA Ligase Reaction Buffer and added to 20 µL reactions containing double stranded DNA fragments and 1X DNA Ligase Reaction Buffer. Reactions are incubated for 30 minutes at 23°C, stopped, and analyzed on a 1% agarose gel stained with ethidium bromide.

Protein Concentration is determined by OD_{280} absorbance.

Limitations of Use
This product was developed, manufactured, and sold for *in vitro* use only. The product is not suitable for administration to humans or animals. MSDS sheets relevant to this product are available upon request.

Physical Purity is evaluated by SDS-PAGE of concentrated and diluted enzyme solutions followed by silver stain detection. Purity is assessed by comparing the aggregate mass of contaminant bands in the concentrated sample to the mass of the protein of interest band in the diluted sample.

Single-Stranded Exonuclease is determined in a 50 µL reaction containing a radiolabeled single-stranded DNA substrate and 10 µL of enzyme solution incubated for 4 hours at 37°C.

Double-Stranded Exonuclease is determined in a 50 µl reaction containing a radiolabeled double-stranded DNA substrate and 10 µL of enzyme solution incubated for 4 hours at 37°C.

Double-Stranded Endonuclease is determined in a 50 µL reaction containing 0.5 µg of plasmid DNA and 10 µL of enzyme solution incubated for 4 hours at 37°C.

E.coli 16S rDNA Contamination is evaluated using 5 µL **r**eplicate samples of enzyme solution denatured and screened in a TaqMan qPCR assay for the presence of contaminating *E.coli* genomic DNA using oligonucleotide primers corresponding to the 16S rRNA locus.

Y9410:

The functionality of the 5X WGS Fragmentation Mix is evaluated by performing library construction, PCR/qPCR and sequencing.

Analysis	Acceptance Criteria
Fragmentation of 100ng human genomic DNA	• 300 bp +/-30 bp peak size of DNA fragment profile is expected at tested condition • Average fragment size from test lots must be within 15% of results from the reference lot
Quantification of library	Final library concentration must be >60nM
Sequencing	• Normalized coverage between 0.7-1.3 for tested GC-contents (10– 80%) • mapped reads must be >90% • Q score of the sequencing run >85%

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