The CleanPlex™ TP53 Panel contains 29 pairs of PCR primers targeting the full TP53 gene exon. The panel kit contains primers, multiplex PCR reagent, digestion reagent and other components necessary to construct amplicon libraries for Next-Generation Sequencing on Illumina Sequencers.

100% coverage of TP53 gene with superior uniformity

The panel covers 100% of the coding regions of the TP53 gene. The observed uniformity of this panel (at ≥ 0.2x mean coverage) is 100%.

Simplify your workflow

The entire library preparation workflow can be completed in 2.5 hours with only 30-minute hands-on time from sample DNA to sequencing-ready libraries. No need for ligation, end repair, DNA fragmentation, overnight hybridization, or microfluidic devices.

Take on difficult samples with limited DNA input

With an average amplicon size of 133 bp, this panel is compatible with degraded samples such as formalin-fixed, paraffin-embedded (FFPE) tissue DNA and circulating cell-free DNA (cfDNA). Obtain high quality sequencing data for germline genotype calling with only 200 pg of input DNA.

Ordering information	
Product Name	**Sku**
CleanPlex™ TP53 Panel (8 rxns)	916008
CleanPlex™ TP53 Panel (96 rxns)	916009
CleanPlex™ TP53 Panel (384 rxns)	916010

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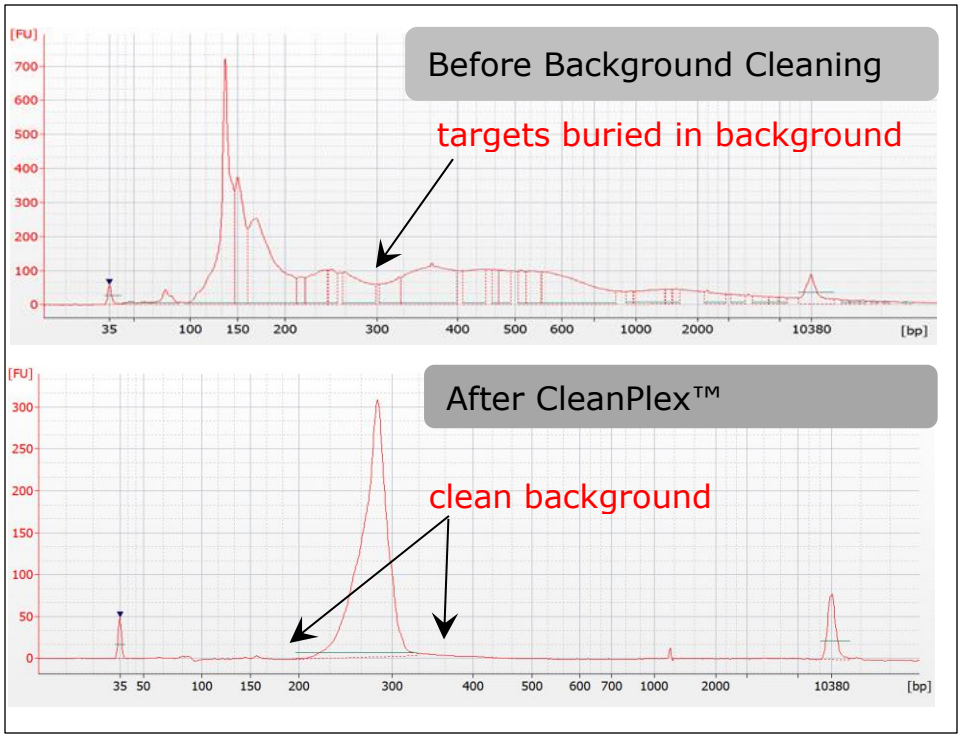
Specifications	
Sequencing Platform	Illumina Sequencers (MiniSeq, MiSeq, NextSeq, Hiseq)
Enrichment Method	Multiplex PCR
# of Primer Pools	2 pools
# of Primer Pairs	29 pairs
# of Target Genes	1 gene
Target Region Size	2080 bp
Amplicon Size	Average 133 bp (from 107-160 bp)
Species	Human
Recommended Input DNA (Amount)	For germline genotype calling: minimum 200 pg; For somatic mutation calling with an LOD of 1%: minimum 20 ng (10 ng / pool)
Sample Type	Genomic DNA, FFPE DNA, cfDNA, and DNA from Blood, Tissue, Cell Culture, and Fine Needle Aspirate (FNA)
Sample Multiplexing (at ~2000x mean coverage)	MiSeq 2×150 read length: ~384 samples NextSeq mid output 2×150 read length: ~2800 samples



Most target enrichment kits do not provide effective background cleaning, resulting in sequencing of non-specific PCR products post amplification, which translates into the generation of excess reads.

By using CleanPlex™ technology, background noise is greatly reduced and only the targets of interest are sequenced. This proprietary multiplex PCR technology eliminates DNA fragmentation, hybridization and ligation steps, resulting in higher target coverage, on-target rates and lower assay failure.

Important advantages to NGS lab operations and data quality

	Competitor X	Paragon Genomics CleanPlex™ Solution
Uniformity	87 - 97%	>98%
Specificity	87 - 97% on-target bases	>97% on-target bases
Time	6 hours	2.5 hours
Minimum Sample input	20 – 40 ng	0.1 ng
Workflow	5 steps	3 steps

Comparison of Paragon Genomics CleanPlex™ solution multiplex PCR method with a competitor

PARAGON GENOMICS
385 Oyster Point Blvd Ste 5-6 | South San Francisco, California 94080 415-545-8783 | sales@paragongenomics.com
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