

Seraseq® gDNA TMB Mix Score 7, 9, 20, 26

0710-1323, 0710-1324, 0710-1325, 0710-1326

This Product Datasheet provides further details around the TMB assessment protocol method as well as the whole exome sequencing (WES) and targeted NGS panel data for the Seraseq gDNA TMB Mix products.

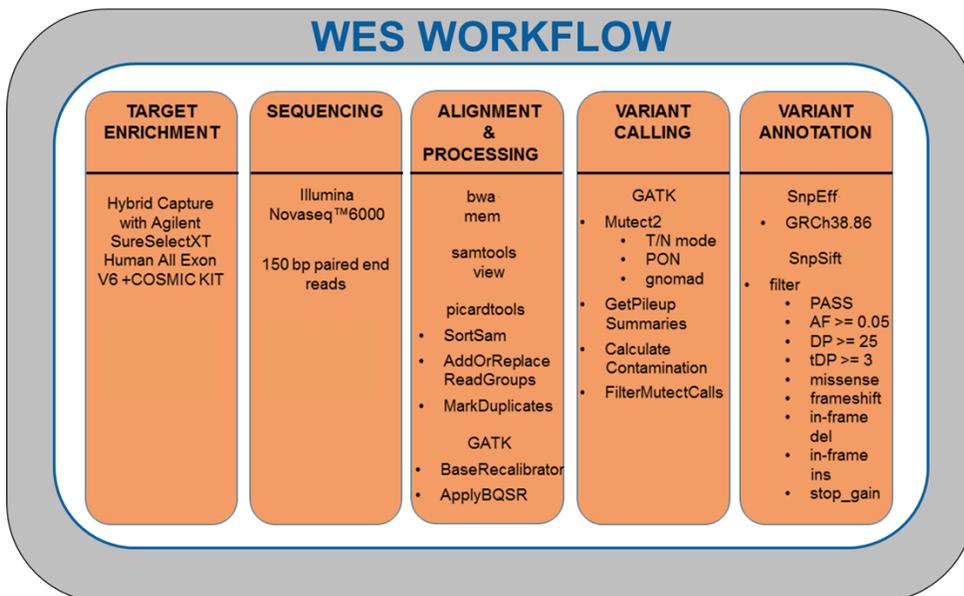
TMB MATERIALS

- Human cell-lines; tumor-normal matched sets
- 100% tumor gDNA + WT gDNA (matched)
- 4 TMB reference standard sets
- WES-generated TMB scores from 7 to 26

TMB MEASUREMENTS BY WHOLE EXOME SEQUENCING (WES)

- Library preparation
 - Agilent SureSelectXT Human AllExon V6 + COSMIC (enrichment kit)
 - Capture region = 32.4 Mb
- Whole Exome Sequencing
 - ILMN NovaSeq 6000
 - Average read depth ~200x (tumor) and ~100x (normal)
 - Other relevant QC parameters
- TMB Analysis Pipeline (Based on FoCR’s TMB Harmonization Project¹)

$$\text{TMB Score} = \frac{\text{\# of Non-synonymous TMB mutations}}{32.4}$$



¹ Merino, D., et. al., Poster #268, 2019 ASCO Meeting, Chicago, USA; <https://meetinglibrary.asco.org/record/172797/abstract>

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WHOLE EXOME SEQUENCING DATA

- Sequencing metrics

Average Per Sample Type	Total Reads	Deduplicated Reads	%	On-Target Reads	%	Mean Exome Coverage	Median Exome Coverage	SD Exome Coverage	% Exome Above Min DP
Tumor Cell Lines	148,141,783	132,026,731	89.1	101,052,908	68.2	192	161	156	96
Normal Cell Lines	91,284,471	74,950,010	82.1	58,101,742	63.6	111	96	79	92

- TMB Scores generated using above parameters & filters are shown in Table 1.

Table-1: WES-derived TMB scores for Seraseq gDNA TMB reference standards

TMB Reference Standards	TMB Scores*
Seraseq [®] gDNA TMB Mix Score 7	7.2 ± 0.2
Seraseq [®] gDNA TMB Mix Score 9	9.5 ± 0.4
Seraseq [®] gDNA TMB Mix Score 20	20.1 ± 0.2
Seraseq [®] gDNA TMB Mix Score 26	25.8 ± 0.5

*Average TMB scores from 2 independent lab measurements

TMB variant lists (WES data) available by contacting us at seracaremarketing@seracare.com

TARGETED NGS PANEL DATA

- Targeted NGS panel-based TMB scores have been generated for the Seraseq TMB reference standards and results compared to WES data (see Figure-1) below.

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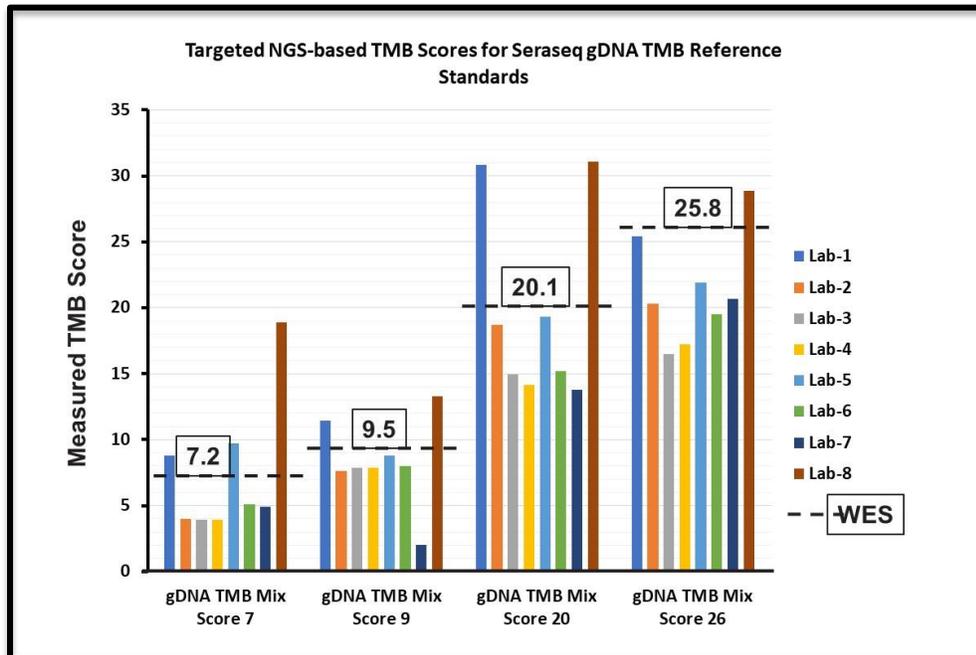


Figure-1: Targeted NGS panel-generated TMB scores for Seraseq gDNA TMB reference standards

- Targeted NGS panel-based TMB measurements were generated by the following collaborators:
 - Memorial Sloan Kettering Cancer Center
 - The Broad Institute
 - Illumina, Inc.
 - Sema4 Genomics
 - Neo New Oncology GmbH
 - Intermountain Precision Genomics
 - Medical College of Georgia @ Augusta University
 - Roche Sequencing

CONTACT US

- For additional information on these TMB reference standards, please visit our dedicated product page at <https://www.seracare.com/tumor-mutational-burden/>, or call us at **+1-800-676-1881**.



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