

Reference Standards For Sequencer Performance Evaluation



Meet the requirements of enterprise participation for sequencing platform development, performance evaluation and registration



This reference standard set covers normal cell line genomic DNA, bacterial genomic DNA and viral genomic DNA, compatible with Next Generation Sequencing (NGS) and long-read sequencing platforms. It can be used for sequencing instrument performance verification, library construction optimization, panel optimization, and bioinformatics software performance verification, verification of relevant algorithms and building models, quality control of off-board data, comparison of data in different platforms, etc.

Key Features

Widely Adaptive

High-quality DNA integrity and fragment length that satisfy the verification requirements of NGS including long-read long-sequencing platform

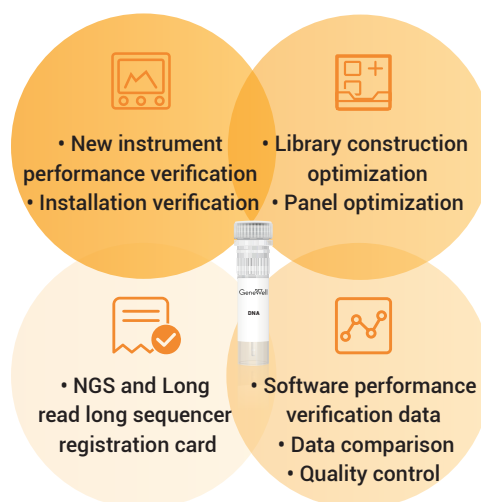
Comprehensive

Different types of DNA products cover the performance evaluation needs of sequencers

Internal Quality Control

Meet the requirements of sequencing instrument registration and certification for internal quality control of enterprise

Application



Product List

Product Code	Product Name	Specification	Shelf Life
IB-GW-CNGB030001	Normal human genomic DNA Reference Standard	25µg/tube, 80ng/µL	-20±5°C, 36 months
IB-GW-SHF001	Human genome DNA Reference Standard (NA12878)	25µg/tube, 100ng/µL	-20±5°C, 36 months
IB-GW-SHF002	Human genome DNA Reference Standard (NA24385)	25µg/tube, 100ng/µL	-20±5°C, 36 months
IB-GW-SBF001	Bacterial genomic DNA Reference Standard (Ecoli)	10µg/tube, 80ng/µL	-20±5°C, 36 months
IB-GW-SBF002	Bacterial genomic DNA Reference Standard (Pseudomonas aeruginosa)	10µg/tube, 80ng/µL	-20±5°C, 36 months
IB-GW-SBF003	Bacterial genomic DNA Reference Standard (staphylococcus aureus)	10µg/tube, 80ng/µL	-20±5°C, 36 months
IB-GW-SBF004	Bacterial genomic DNA Reference Standard (Mixed bacteria)	10µg/tube, 80ng/µL	-20±5°C, 36 months
IB-GW-SVF001	Viral genomic DNA Reference Standard (HPV 11)	10µg/tube, 80ng/µL	-20±5°C, 36 months

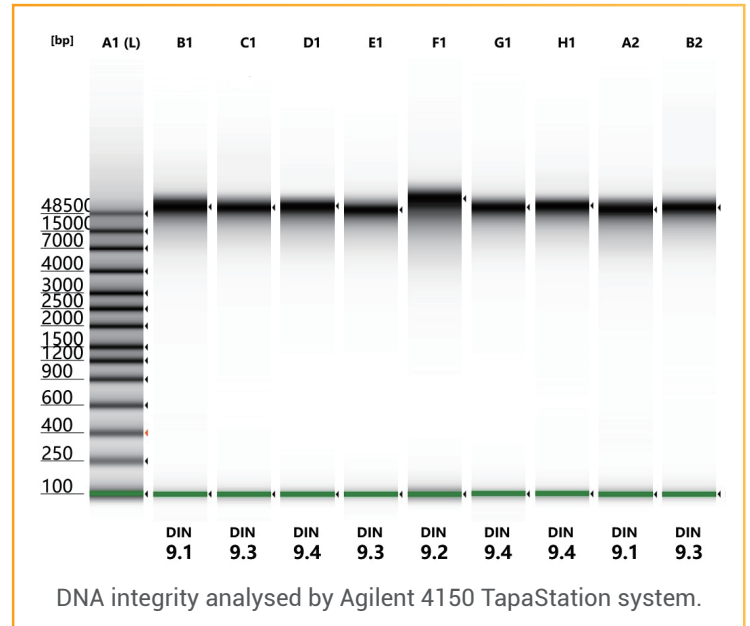
Note: GW-SBF004 Mixed species of bacteria: Escherichia coli, Bacillus subtilis, Fecal bacteria, Listeria monocytogenes, Pseudomonas aeruginosa

Quality Control

Test Item	Detection Method	Human gDNA	Bacterium gDNA	Virus gDNA
DNA Purity	Nanodrop	$1.8 \leq A260/A280 \leq 2.0$, $1.9 \leq A260/A230 \leq 2.4$		
DNA Integrity	4150 Genomic	DIN ≥ 8.5		DIN ≥ 8.0
Main Peak Size	4150 Genomic	≥ 48 kb	≥ 30 kb	≥ 13 kb

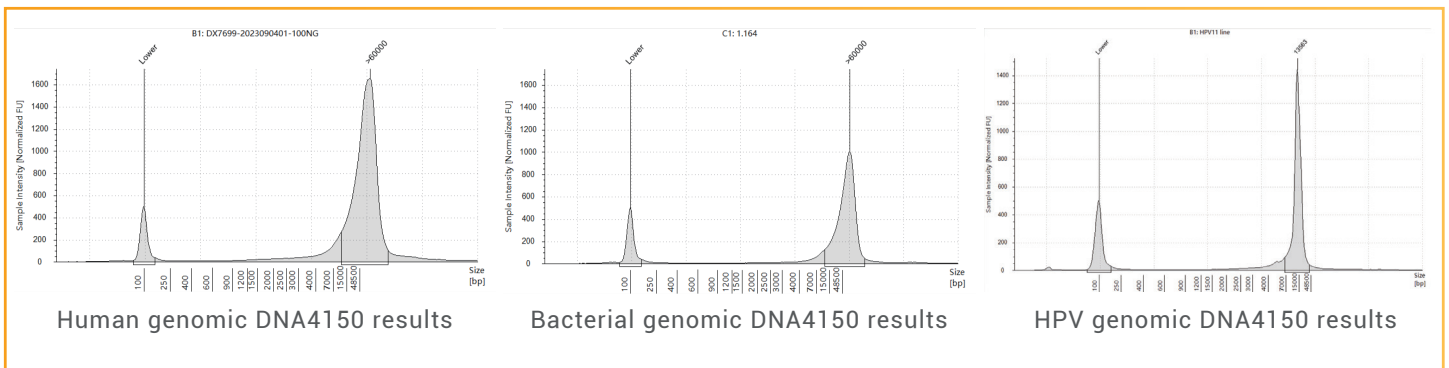
DNA Integrity

LANE	Sample Message
A1	Marker
B1	Human genome DNA1
C1	Human genome DNA2
D1	Human genome DNA3
E1	Human genome DNA4
F1	Human genome DNA5
G1	Bacterial genomic DNA Reference Standard (staphylococcus aureus)
H1	Bacterial genomic DNA Reference Standard (Enterococcus faecalis Reference Standard)
A2	Bacterial genomic DNA Reference Standard (Bacillus subtilis)
B2	Bacterial genomic DNA Reference Standard (Listeria monocytogenes)



DNA integrity directly affects the quality of sequencing results. The DIN value is an objective measurement of DNA integrity, issued by automated electrophoresis device between 1 to 10. Higher DIN value reflects better DNA integrity. The above chart demonstrates that GeneWell reference standards contain high-integrity genomic DNA.

DNA Main Peak Size



Fragment sizes of GeneWell reference standards analysed by Agilent 4150 TapaStation system. The small peak at 100bp is a lower standard in analysis and the main peak reflects the actual size of genomic DNA. Above chart claims that GeneWell gDNA reference standard have a high completeness.



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