

# NovaSeq X Plus Concordance Data Whole Genome Sequencing

## RTG Results

The RTG (Real Time Genomics) tool results refer to the variants' comparison between the NovaSeq X Plus sequencing platform and the Genome in a Bottle Consortium (GIAB) dataset.

By comparing the NA12878 (human reference genome sample) variant results from the NovaSeq X Plus platform to the GIAB dataset, we can assess the accuracy, sensitivity, and specificity of the NovaSeq X Plus platform in detecting genetic variants.

### RTG Results (NovaSeq X Plus vs GIAB)

Type	True-pos	False-pos	False-neg	Precision	Sensitivity	F-measure
Total	3673849	20811	48239	0.9944	0.9870	0.9907
SNP	3223105	18055	31655	0.9944	0.9903	0.9923
InDel	447134	7266	20194	0.984	0.9568	0.9702

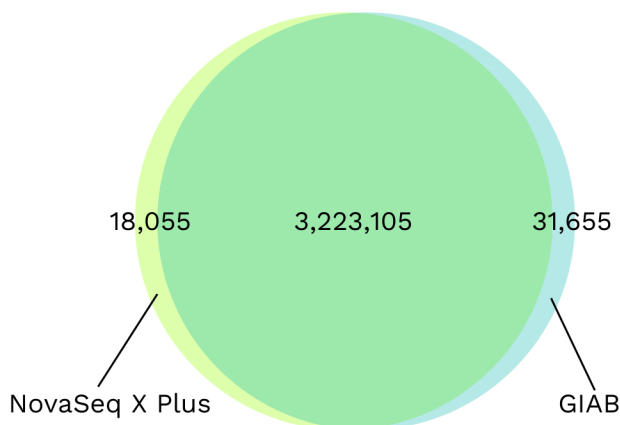
### RTG Results (NovaSeq 6000 vs GIAB)

Type	True-pos	False-pos	False-neg	Precision	Sensitivity	F-measure
Total	3670148	54361	51940	0.9854	0.9860	0.9857
SNP	3227976	19150	26784	0.9941	0.9918	0.9929
InDel	438480	39958	28848	0.9165	0.9383	0.9272

## Venn Diagrams of SNPs Between NovaSeq X Plus and NovaSeq 6000

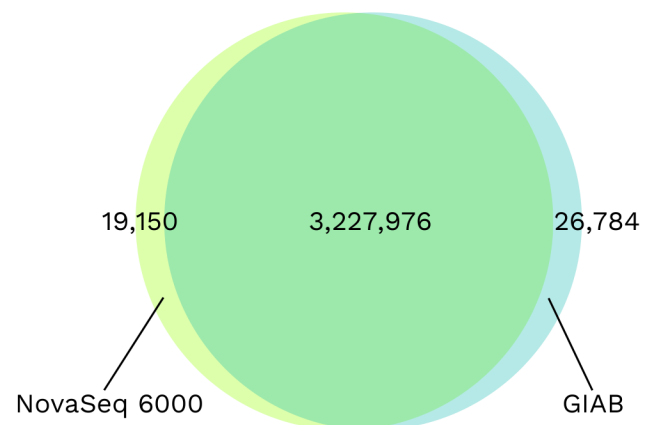
NA12878 — compared with VCF in GIAB (Gap in a bottle, NIST), 30x down sampled sequencing data.

### NovaSeq X Plus vs GIAB (NA12878)



~99% detected mutations in the NovaSeq X Plus were shared with GIAB

### NovaSeq 6000 vs GIAB (NA12878)



~99% detected mutations in the NovaSeq 6000 were shared with GIAB

## PCR-Free and TruSeq Nano Data

### PCR Free Data Comparable to NovaSeq 6000

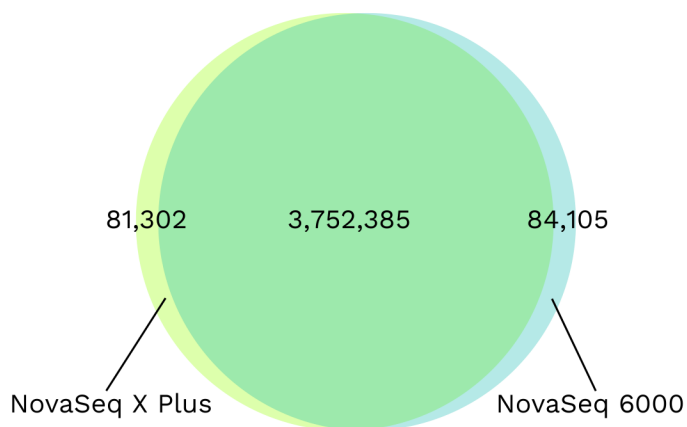
PCR-Free Kit	Type	True-pos	False-pos	False-neg	Precision	Sensitivity	F-measure
NovaSeq X Plus vs NovaSeq 6000	Total	4520644	147508	155394	0.968	0.967	0.968
	SNP	3752385	81302	84105	0.979	0.978	0.978
	InDel	769894	63813	69665	0.923	0.917	0.920

### TruSeq Nano Data Comparable to NovaSeq 6000

TruSeq Nano Kit	Type	True-pos	False-pos	False-neg	Precision	Sensitivity	F-measure
NovaSeq X Plus vs NovaSeq 6000	Total	4467770	182588	177130	0.961	0.962	0.961
	SNP	3765675	82913	72724	0.978	0.981	0.980
	InDel	710893	105385	95615	0.871	0.881	0.876

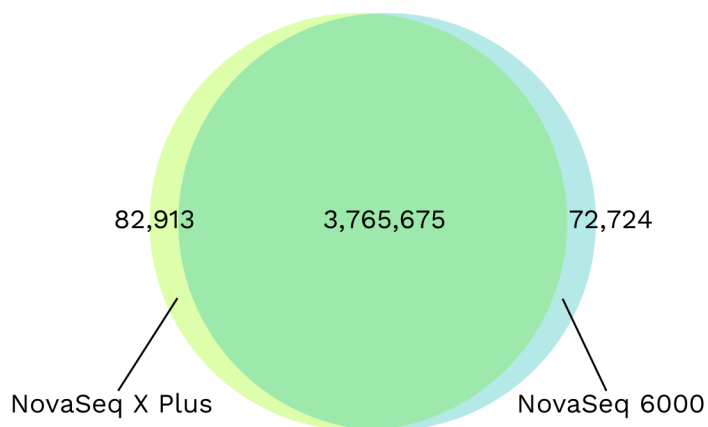
## Venn Diagram of SNPs Between NovaSeq X Plus and NovaSeq 6000

NovaSeq X Plus vs NovaSeq 6000  
(PCR-Free)



~98% detected mutations in the NovaSeq X Plus were shared with NovaSeq 6000

NovaSeq X Plus vs NovaSeq 6000  
(Nano)



~98% detected mutations in the NovaSeq X Plus were shared with NovaSeq 6000