

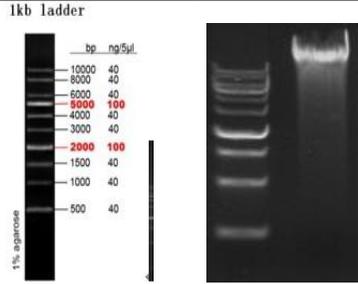
## CERTIFICATE OF ANALYSIS

### Product information

Name	Panel-Ref® gDNA Cocktail VI Reference Standard
Catalog No.	CBP90022
Lot No.	GBD65967736
Format	Genomic DNA
Buffer	Tris-EDTA
Storage Conditions	4°C
Date of Manufacture	2021/04/20
Expiry	36 months from the date of manufacture

### Quality Control

Test Items	Standard	Results	Passed
Quantity	1.00 µg/vial*1 vial	1.00 µg/vial*1 vial	√
Concentration	40.00 ng/uL±10%	40.40 ng/uL by Qubit 3.0 detection	√
OD <sub>260</sub> /OD <sub>280</sub>	1.7~2.1	1.79 by Nanodrop detection	√

DNA electrophoresis	No Degradation	 <p>1kb ladder</p> <p>bp ng/5µl</p> <p>10000 40</p> <p>8000 40</p> <p>6000 40</p> <p>4000 40</p> <p>3000 40</p> <p>2000 100</p> <p>1500 40</p> <p>1000 40</p> <p>500 40</p> <p>1% agarose</p> <p>M</p> <p>1</p> <p>M: Marker</p> <p>1: Panel-Ref® gDNA Cocktail VI Reference Standard</p>	√
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Gene	AA Change	CDS Change	Expected AF	DdPCR AF(n=2)	Chr position (GRCh37)
BRAF	p.V600E	c.1799T>A	5.00%	4.79%	chr7:140453136
PIK3CA	p.H1047R	c.3140A>G	5.00%	5.03%	chr3:178952085
KRAS	p.G13D	c.38G>A	5.00%	5.11%	chr12:25398281
BRCA2	p.I2675Dfs*6	c.8021dup	5.00%	5.26%	chr13:32937360

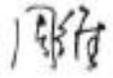
### DdPCR Acceptance criteria

Expected value	Acceptance criteria	Expected value	Acceptance criteria
<1%	Expected value ± 50%	<5 copies	Expected value ± 30%
≥1% and <5%	Expected value ± 30%	≥5 and <10 copies	Expected value ± 20%
≥5% and <10%	Expected value ± 20%	≥10 copies	Expected value ± 10%
≥10%	Expected value ± 10%		

**Caution:**

For research use only.

If you have any questions about the Certificate of Analysis, please contact us.

Certified by:  Date:\*\*\*\*

 Date:\*\*\*\*