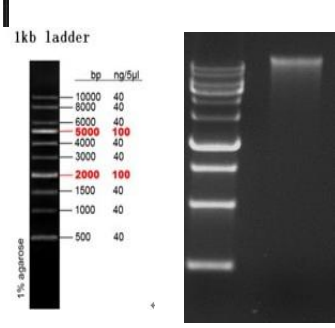


## CERTIFICATE OF ANALYSIS

### Product information

Name	Panel-Ref® BRCA1/2 Germline Mutation Cocktail I
Catalog No.	CBP90003
Lot No.	CBFA22123004
Format	Genomic DNA
Buffer	Tris-EDTA
Storage Conditions	4°C
Date of Manufacture	2022/12/30
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%	40.70 ng/uL by Qubit 3.0 detection	√
OD <sub>260</sub> /OD <sub>280</sub>	1.7~2.1	1.92 by Nanodrop detection	√
DNA electrophoresis	No Degradation	 <p>1kb ladder</p> <p>bp ng/µl</p> <p>10000 40 8000 40 6000 40 4000 40 3000 40 2000 100 1500 40 1000 40 500 40</p> <p>M 1</p> <p>M: Marker 1: Panel-Ref® BRCA1/2 Germline Mutation Cocktail I</p>	√

Gene	Clinical significance	Allele origin	mRNA	DNA Change	AA Change	%AF	WES-500x	DdPCR
BRCA1	Benign	Germline	NM_007300.4	c.4837A>G	p.S1613G	50	46.36	N/A
BRCA1	Benign	Germline	NM_007300.4	c.3548A>G	p.K1183R	50	47.46	N/A
BRCA1	Benign	Germline	NM_007300.4	c.2612C>T	p.P871L	100	100	N/A
BRCA1	Benign	Germline	NM_007300.4	c.2458A>G	p.K820E	50	52.18	N/A
BRCA1	Benign	Germline	NM_007300.4	c.2082C>T	p.S694S	50	50.9	N/A
BRCA1	Uncertain significance	Germline	NM_007300.4	c.1303G>T	p.D435Y	50	47.53	51.03%
BRCA2	Benign	Germline	NM_000059.3	c.865A>C	p.N289H	50	45.65	N/A
BRCA2	Benign	Germline	NM_000059.3	c.2229T>C	p.H743H	50	45.7	N/A
BRCA2	Benign	Germline	NM_000059.3	c.2971A>G	p.N991D	50	45.73	N/A

BRCA2 Benign	Germline	NM_000059.3	c.3516G>A	p.S1172S	50	48.96	N/A
BRCA2 Benign	Germline	NM_000059.3	c.3807T>C	p.V1269V	50	50	N/A
BRCA2 Benign	Germline	NM_000059.3	c.4563A>G	p.L1521L	100	100	N/A
BRCA2 Benign	Germline	NM_000059.3	c.5345delA	p.N1784fs	50	54.11	49.34%
BRCA2 Benign	Germline	NM_000059.3	c.6513G>C	p.V2171V	100	100	N/A
BRCA2 Benign	Germline	NM_000059.3	c.7397T>C	p.V2466A	100	100	99.86%
BRCA2 Uncertain significance	Germline	NM_000059.3	c.1365A>G	p.S455S	50	51.11	N/A

**DdPCR Acceptance criteria**


Expected value	Acceptance criteria	Expected value	Acceptance criteria
0%	≤0.1%	<5 copies	Expected value ± 30%
<1%	Expected value ± 50%	≥5 and <10 copies	Expected value ± 20%
≥1% and <5%	Expected value ± 30%	≥10 copies	Expected value ± 15%
≥5% and <10%	Expected value ± 20%		
≥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:\*\*\*\*