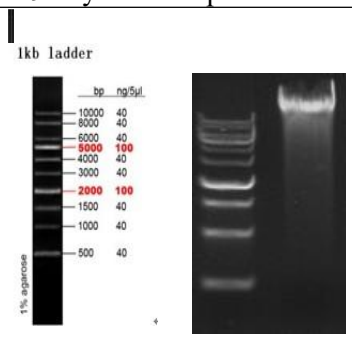
CERTIFICATE OF ANALYSIS

Product information

Name	Panel-Ref® BRCA1/2 Germline Mutation Cocktail III
Catalog No.	CBP90025
Lot No.	CBFA23020625
Format	Genomic DNA
Buffer	Tris-EDTA
Storage Conditions	4°C
Date of Manufacture	Feb.-06-2023
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%	40.30 ng/uL by Qubit 3.0 detection	√
OD_{260}/OD_{280}	1.7~2.1	1.91 by Nanodrop detection	√
DNA electrophoresis	No Degradation	 M: Marker 1: Panel-Ref® BRCA1/2 Germline Mutation Cocktail III	√

Gene	Clinical significance	Allele origin	mRNA	DNA Change	AA Change	%AF	WES-500x	DdPCR
BRCA1	Benign	Germline	NM_007300.4	c.4900A>G	p.S1634G	100	99.82	N/A
BRCA1	Benign	Germline	NM_007300.4	c.4308T>C	p.S1436=	100	100	N/A
BRCA1	Uncertain Significance	Germline	NM_007300.4	c.3569C>A	p.P1190H	50	51.3	N/A
BRCA1	Benign	Germline	NM_007300.4	c.3548A>G	p.K1183R	100	100	N/A
BRCA1	Benign	Germline	NM_007300.4	c.3113A>G	p.E1038G	100	100	N/A
BRCA1	Benign	Germline	NM_007300.4	c.2612C>T	p.P871L	100	100	99.96
BRCA1	Benign	Germline	NM_007300.4	c.2311T>C	p.L771=	100	100	N/A
BRCA1	Benign	Germline	NM_007300.4	c.2082C>T	p.S694=	100	100	N/A
BRCA1	Uncertain	Germline	NM_007300.4	c.1988G>A	p.S663N	50	50.98	N/A

	Significance							
BRCA2	Benign	Germline	NM_000059.3	c.865A>C	p.N289H	50	42.89	N/A
BRCA2	Uncertain Significance	Germline	NM_000059.3	c.1365A>G	p.S455=	50	48.84	N/A
BRCA2	Uncertain Significance	Germline	NM_000059.3	c.1460C>T	p.A487V	50	48.69	N/A
BRCA2	Benign	Germline	NM_000059.3	c.2229T>C	p.H743=	50	52.58	N/A
BRCA2	Benign	Germline	NM_000059.3	c.2971A>G	p.N991D	50	47.77	N/A
BRCA2	Benign	Germline	NM_000059.3	c.3396A>G	p.K1132=	50	45.65	N/A
BRCA2	Pathogenic	Germline	NM_000059.3	c.3599_3600del	p.C1200*	50	49.12	50.31
BRCA2	Benign	Germline	NM_000059.3	c.4068G>A	p.L1356=	50	47.31	N/A
BRCA2	Benign	Germline	NM_000059.3	c.4563A>G	p.L1521=	100	100	N/A
BRCA2	Pathogenic	Germline	NM_000059.3	c.5351del	p.N1784Tfs*7	50	50.98	49.63
BRCA2	Benign	Germline	NM_000059.3	c.6513G>C	p.V2171=	100	100	N/A
BRCA2	Benign	Germline	NM_000059.3	c.7397T>C	p.V2466A	100	100	99.91
BRCA2	Likely Pathogenic	Germline	NM_000059.3	c.8351G>A	p.R2784Q	50	50.26	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 Date:****

Date:****