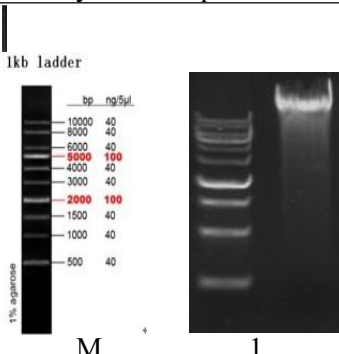


CERTIFICATE OF ANALYSIS

Product information

Name	Panel-Ref® gDNA Cocktail IV Reference Standard
Catalog No.	CBP90011
Lot No.	CBFA23040501
Format	Genomic DNA
Buffer	Tris-EDTA
Storage Conditions	4°C
Date of Manufacture	2023/04/05
Expiry	36 months from the date of manufacture

Quality Control

Test Items	Standard	Results	Passed																																																																													
Quantity	1.00 µg/vial*2 vials	1.00 µg/vial*2 vials	√																																																																													
Concentration	40.00 ng/uL±10%	40.40 ng/uL by Qubit 3.0 detection	√																																																																													
OD ₂₆₀ /OD ₂₈₀	1.7~2.1	1.90 by Nanodrop detection	√																																																																													
DNA electrophoresis	No Degradation	<div></div> <p>M: Marker 1: Panel-Ref® gDNA Cocktail IV Reference Standard</p>	√																																																																													
MSS/MSI status	MSI-H	<p>MSI-H by PCR detection</p> <table><tr><th colspan="7">CBP90011 MSI-H</th></tr><tr><th>Marker</th><th>Size 1</th><th>Size 2</th><th>Size 3</th><th>Size 4</th><th>Size 5</th><th>Size 6</th></tr><tr><td>NR21</td><td>122.49</td><td>131.52</td><td></td><td></td><td></td><td></td></tr><tr><td>Bat26</td><td>164.07</td><td>175.25</td><td></td><td></td><td></td><td></td></tr><tr><td>PentaC</td><td>208.81</td><td>219.19</td><td>224.43</td><td>229.56</td><td>234.78</td><td>240.00</td></tr><tr><td>Bat25</td><td>112.18</td><td>117.81</td><td></td><td></td><td></td><td></td></tr><tr><td>NR27</td><td>141.74</td><td>146.23</td><td>155.21</td><td></td><td></td><td></td></tr><tr><td>PentaD</td><td>177.24</td><td>181.77</td><td>186.46</td><td>196.15</td><td></td><td></td></tr><tr><td>Amel</td><td>106.82</td><td>112.37</td><td></td><td></td><td></td><td></td></tr><tr><td>NR24</td><td>123.14</td><td>131.05</td><td></td><td></td><td></td><td></td></tr><tr><td>Mono27</td><td>163.28</td><td>170.04</td><td></td><td></td><td></td><td></td></tr></table>	CBP90011 MSI-H							Marker	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6	NR21	122.49	131.52					Bat26	164.07	175.25					PentaC	208.81	219.19	224.43	229.56	234.78	240.00	Bat25	112.18	117.81					NR27	141.74	146.23	155.21				PentaD	177.24	181.77	186.46	196.15			Amel	106.82	112.37					NR24	123.14	131.05					Mono27	163.28	170.04					√
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Gene	AA Change	CDS Change	Expected %AF	Measured %AF
EGFR	p.G719S	c.2155G>A	5%	4.66%
BRAF	p.V600K	c.1798_1799GT>AA	5%	4.49%

PIK3CA	p.H1047R	c.3140A>G	5%	5.09%
KRAS	p.G13D	c.38G>A	5%	5.98%
NRAS	p.G12D	c.35G>A	5%	4.37%
BRCA2	p.I2675Dfs*6	c.8021dup	5%	5.86%
SLC34A2-ROS1	E4-E32	DNA Translocation	5%	4.65%
EML4-ALK	E6-A20	DNA Translocation	5%	5.67%
CCDC6-RET	E1-E12	DNA Translocation	5%	5.48%
MET	Exon 14 Skippig	c.3082+1G>T	5%	5.09%
ERBB2	CNV	Amplification	CN=6	CN=5.23
MYC	CNV	Amplification	CN=7	CN=6.12

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:****