

## Multiplex cfDNA Reference Standard

**IMPORTANT:** Centrifuge tube prior to opening to prevent loss of product

PRODUCT INFORMATION	
Catalog ID	HD780
Batch ID	
Product Description	<a href="#">Multiplex I cfDNA Reference Standard Set</a>
Date of Manufacture	
Manufacturing QMS Status	ISO 9001

PROPERTIES	
Quantity	4 vials of 350 ng
Concentration	20 ng/μL
Average Fragment Length	160 bp
Buffer	Tris-EDTA (10 mM Tris-HCl, 1 mM EDTA), pH 8.0
Storage Conditions	+4°C
Use by	For the latest information on product shelf life, please visit our website: <a href="https://www.horizondiscovery.com/reference-standards/coa-information">https://www.horizondiscovery.com/reference-standards/coa-information</a>

CUSTOMER SUPPORT	
Technical Support	<a href="mailto:technical@horizondiscovery.com">technical@horizondiscovery.com</a>
Customer Service	<a href="mailto:orders@horizondiscovery.com">orders@horizondiscovery.com</a>

ADDITIONAL INFORMATION	

### Horizon Discovery

8100 Cambridge Research Park,  
Waterbeach, Cambridge,  
CB25 9TL, United Kingdom  
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t + 44 (0) 1223 976 000  
f + 44 (0) 1223 655 581  
e [orders@horizondiscovery.com](mailto:orders@horizondiscovery.com)

**QUALITY CONTROL**

Allele Frequency (AF) and Genotype: **Droplet Digital™ PCR**

Gene	Variant	Expected AF (%)	Actual AF (%)	Acceptance Criteria (%)		Pass/Fail
				Low	High	
<b>5% Allele Frequency (Part No: HD777)</b>						
EGFR	L858R	5.0		3.50	6.50	
EGFR	ΔE746-A750	5.0		3.50	6.50	
EGFR	T790M	5.0		3.50	6.50	
EGFR	V769-D770insASV	5.0		3.50	6.50	
KRAS	G12D	6.3		4.40	8.20	
NRAS	Q61K	6.3		4.40	8.20	
NRAS	A59T	6.3		4.40	8.20	
PIK3CA	E545K	6.3		4.40	8.20	
<b>1% Allele Frequency (Part No: HD778)</b>						
EGFR	L858R	1.0		0.60	1.40	
EGFR	ΔE746-A750	1.0		0.60	1.40	
EGFR	T790M	1.0		0.60	1.40	
EGFR	V769-D770insASV	1.0		0.60	1.40	
KRAS	G12D	1.3		0.80	1.80	
NRAS	Q61K	1.3		0.80	1.80	
NRAS	A59T	1.3		0.80	1.80	
PIK3CA	E545K	1.3		0.80	1.80	
<b>0.1% Allele Frequency (Part No: HD779)</b>						
EGFR	L858R	0.10		0.05	0.15	
EGFR	ΔE746-A750	0.10		See below*		
EGFR	T790M	0.10		See below*		
EGFR	V769-D770insASV	0.10		0.05	0.15	
KRAS	G12D	0.13		See below*		
NRAS	Q61K	0.13		0.07	0.20	
NRAS	A59T	0.13		See below*		
PIK3CA	E545K	0.13		See below*		
*Observed AF (%) for 0.1% variants must be greater than observed AF (%) of the corresponding wild type assay						
<b>100% Wild Type (Part No: HD776)</b>						
EGFR	L858R	0.00		≤0.10		
EGFR	ΔE746-A750	0.00		≤0.10		
EGFR	T790M	0.00		≤0.10		
EGFR	V769-D770insASV	0.00		≤0.10		
KRAS	G12D	0.00		≤0.10		
NRAS	Q61K	0.00		≤0.10		
NRAS	A59T	0.00		≤0.10		
PIK3CA	E545K	0.00		≤0.10		

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**QUALITY CONTROL (continued)**
**Fragmentation Size: D1000 DNA ScreenTape assay (Agilent Technologies)**

Acceptance Criteria	Reading	Pass/Fail
<b>5% Allele Frequency (Part No: HD777)</b> 160 bp $\pm$ 10% (144 bp – 176 bp)		
<b>1% Allele Frequency (Part No: HD778)</b> 160 bp $\pm$ 10% (144 bp – 176 bp)		
<b>0.1% Allele Frequency (Part No: HD779)</b> 160 bp $\pm$ 10% (144 bp – 176 bp)		
<b>100% Wild Type (Part No: HD776)</b> 160 bp $\pm$ 10% (144 bp – 176 bp)		

**Quantification: Qubit® dsDNA BR assay (Invitrogen)**

Acceptance Criteria	Reading	Pass/Fail
<b>5% Allele Frequency (Part No: HD777)</b> 20 ng/ $\mu$ L $\pm$ 15% (17.0 – 23.0 ng/ $\mu$ L)		
<b>1% Allele Frequency (Part No: HD778)</b> 20 ng/ $\mu$ L $\pm$ 15% (17.0 – 23.0 ng/ $\mu$ L)		
<b>0.1% Allele Frequency (Part No: HD779)</b> 20 ng/ $\mu$ L $\pm$ 15% (17.0 – 23.0 ng/ $\mu$ L)		
<b>100% Wild Type (Part No: HD776)</b> 20 ng/ $\mu$ L $\pm$ 15% (17.0 – 23.0 ng/ $\mu$ L)		

**FOR RESEARCH USE ONLY**

Manufactured in the UK

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