

## BATCH CERTIFICATE

For Research Use Only

### PRODUCT INFORMATION AND QUALITY CONTROL

NAME OF PRODUCT	ESR1 Reference Vial 4 1% AF cfDNA
DESCRIPTION	ESR1 Reference Vial 4 1% AF cfDNA is part of ESR1 Reference Set 1% AF cfDNA (SID-000144). It consists of highly characterized human DNA from cell line containing ESR1 p.E380Q, ESR1 p.S463P and ESR1 p.Y537N.
CATALOG NUMBER	SID-000148
<b>BATCH NUMBER</b>	<b>00603</b>
MANUFACTURING CONDITIONS	<ul style="list-style-type: none"> <li>· Manufactured und sealed in class 2 safety cabinet</li> <li>· Manufactured according to DIN EN ISO 13485:2016</li> </ul>
PACKAGE SIZE AND TYPE	<ul style="list-style-type: none"> <li>· 2D barcoded tube with screw cap</li> <li>· Material: Polypropylen (PP)</li> </ul>
DATE OF MANUFACTURE	23.11.2023
EXPIRY DATE	22.11.2025
TARGET CONCENTRATION	20 ng/μl (dsDNA)
TARGET QUANTITY	400 ng (dsDNA)
NOMINAL VOLUME	20 μl
MUTATION * GRCh38 COSMIC v99	ESR1 p.E380Q (COSV52782264*, substitution, c.1138G>C, Exon 5) ESR1 p.S463P (COSV52784970*, substitution, c.1387T>C, Exon 7) ESR1 p.Y537N (COSV52784978*, substitution, c.1609T>A, Exon 8)
ALLELE FREQUENCY	1.00%
QUALITY	DNA quantity metrologically traceable to internationally certified reference material (ERM_AD442K). The copy number values are metrologically traceable to the natural units count 1 and ratio 1 and International System of Units (SI) derived units of volume.
STORAGE CONDITIONS	+ 2-8°C
MANUFACTURING SITE	SensID GmbH Schillingallee 68, 18057 Rostock, Germany

TEST METHOD AND ACCEPTANCE CRITERIA	Quality control	Test method		Acceptance criteria	
	Fragmentation	Fragment length analysis: Agilent D5000 ScreenTape System (Agilent Technologies)		Peak size: 167 bp ± 15% (142 bp – 192 bp)	
	Quantification	Total DNA measurement (ssDNA): Spectrophotometry**		Total DNA: not applicable	
		dsDNA measurement: Qubit dsDNA BR Assay Kit (Invitrogen)		dsDNA: 20.0 ng/µl ± 15% (17.0 – 23.0 ng/µl)	
	**Protocol NK603 – Community Reference Laboratory for GM Food and Feed				
Allele frequency	Allele frequency analysis: ddPCR (BioRad QX200™)		AF 1.00% ± 40% (0.60 – 1.40%)		
RESULTS OF ANALYSIS	Quality control	Result		PASS / FAIL	
	Fragmentation	170 bp		PASS	
	Quantification	50.2 ng/µl (total DNA)		PASS	
		22.2 ng/µl (dsDNA)			
	Allele frequency	Mutation		AF in %	PASS / FAIL
		ESR1 p.E380Q		1.20	PASS
ESR1 p.S463P		1.39	PASS		
ESR1 p.Y537N		1.12	PASS		
COMMENTS / REMARKS	Additional information: Measurement of copy number				
MEASUREMENT OF COPY NUMBER	Mutation		CN wt/ng	CN mut/ng	
	ESR1 p.E380Q		249.14	3.03	
	ESR1 p.S463P		284.40	4.02	
	ESR1 p.Y537N		294.95	3.34	
	wt: wildtype; mut: mutation <i>The table above indicates the values of the QC assays performed by SensID GmbH with a DNA input of 1 ng. The value for the respective mutation results from the mean value of QC samples according to ISO 2859-1:2014-08 (CN values are rounded). CN concentration values per nanogram (ng) are based on droplet digital (ddPCR) assay counts dilution factors, and droplet volume measurements. The detection of the amount of CNs may vary depending on the assay used. Therefore, due to assay properties, there may be deviations in the observed number of copies and allele frequencies compared to the values given here.</i>				

Name and position/title of person authorising the batch release:

Björn Nowack, Managing Director

Date of batch release: 28.11.2023

Signature batch release: Björn Nowack

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