Product Description
SALSA® Reference Selection & Binning DNA SD038-S03

Version S03
As compared to version S02, the content has changed by replacing synthetic with plasmid DNA; no changes in target sequences, except that in SD038-S03 the target of the 105 nt Y-fragment is no longer present.

Catalogue number
- **SD038**: SALSA Reference Selection DNA, 6 reactions

Precautions and warnings
For professional use only. Always consult the most recent product description AND the corresponding probemix product description AND the MLPA General Protocol before use: www.mrcholland.com. Reference Selection DNA is not known to contain any harmful agents.

Safety data sheet
Based on the concentrations present, none of the ingredients are hazardous as defined by the Hazard Communication Standard. **A Safety Data Sheet (SDS) is not required for these products**: none of the preparations contain dangerous substances (as per Regulation (EC) No 1272/2008 [EU-GHS/CLP] and amendments) at concentrations requiring distribution of an SDS (as per Regulation (EC) No 1272/2008 [EU-GHS/CLP] and 1907/2006 [REACH] and amendments). If spills occur, clean with water and follow appropriate site procedures.

General information
The SALSA Reference Selection & Binning DNA SD038 is a research use only (RUO) reagent to be used in combination with SALSA MLPA probemixes P110-C1 FCGR mix 1 and P111-C1 FCGR mix 2, a SALSA MLPA Reagent Kit and Coffalyser.Net™ analysis software for the selection of suitable reference samples and the processes of linking all probe signals to their identity by use of the probe lengths. SD038 contains the targets of all probes included in the above-listed probemixes.

We recommend the use of this Reference Selection & Binning DNA SD038 only for initial experiments on DNA samples from healthy individuals with the intention to select suitable reference samples. Reference Selection & Binning DNA should never be used as a reference sample in the MLPA data analysis of patient samples.

Reference samples for use in MLPA experiments should preferably be derived from the same type of tissue, and be purified by the same method, as the DNA samples to be tested. For certain applications the selection of suitable reference samples is complicated. When testing DNA samples from healthy individuals, it is not expected to find suitable reference samples covering all targets of P110-C1 mix 1 and/or P111-C1 mix 2. A selection of several reference samples would therefore be needed.

Experimental set up
Reference Selection & Binning DNA SD038 is a hybrid product with dual functionality: (1) selection of suitable reference samples, and (2) linking of probe signals to their identity (i.e. binning).

Experiments for the selection of suitable reference samples should include three reactions with SALSA Reference Selection & Binning DNA SD038 as well as reactions on a number of independent DNA samples from healthy individuals. Patient samples should not be included in the experiment.

For binning purposes, inclusion of one reaction with SALSA Reference Selection & Binning DNA SD038 in the initial MLPA experiment is essential as it can aid in data binning of the peak pattern when using Coffalyser.Net software. Furthermore, one reaction with Reference Selection & Binning DNA should be included in the experiment whenever changes have been applied to the set-up of the capillary electrophoresis device (e.g. when a different polymer type is used).

Individual MLPA reactions for reference selection and binning purposes should be performed with 5 µl of Reference Selection & Binning DNA. Please note that the SD038 reaction for binning purposes in the initial MLPA experiment can be one of the three SD038 reactions included in an experiment for the selection of suitable reference samples.

Data analysis
Coffalyser.Net software should be used for analysis of MLPA experiments. Coffalyser.Net software is freely available at www.mrcholland.com.

To select suitable reference samples, the three SD038 reactions should be set as reference samples in the data analysis. For binning purposes, select SD038 in the *bin smpl* –column when performing the fragment analysis step in Coffalyser.Net. By selecting the SD038 sample as your binning sample, probes will be correctly identified in the peak pattern across all samples.

Reference Selection DNA content
SD038 consists of human genomic DNA purified from a selected cell line, and a titrated amount of plasmid DNA. SD038 DNA contains an established number of template copies for each probe in SALSA MLPA probemixes P110-C1 FCGR mix 1 and P111-C1 FCGR mix 2 (for details, see Table 1 and Table 2).

Table 1. P110-C1 probe targets in Reference Selection DNA SD038-S03

Gene/Exon	Probe length	Probe ID	Present in probemix version	Copy number	Remarks
Reference	130 nt	19551-L26105	C1	2	
FCGR3A intron 1	137 nt	21806-L30537	C1	2	
Reference	143 nt	10113-L31635	C1	2	
FCGR2A/2C exon 8	148 nt	21814-L30545	C1	2	allele-specific
FCGR3B intron 3	160 nt	21819-L30550	C1	2	
FCGR3A/3B exon 3	166 nt	21822-L30553	C1	2	allele-specific
Reference	172 nt	16647-L19180	C1	2	
HSPA7 downstream	178 nt	21816-L30547	C1	2	
FCGR2B upstream	184 nt	21824-L30555	C1	1	allele-specific
FCGR2A exon 4	190 nt	21799-L30530	C1	1 *	allele-specific
FCGR3A exon 5	196 nt	21803-L30534	C1	2	
FCGR2B/2C exon 5	202 nt	21827-L31274	C1	4	allele-specific
FCGR2C intron 7	211 nt	03609-L02976	C1	2	allele-specific
FCGR2B/2C intron 3	220 nt	21826-L30557	C1	2	allele-specific
FCGR2A/2C intron 7	238 nt	21813-SP1007-L30544	C1	2 *	allele-specific
FCGR2A exon 3	247 nt	21958-L30771	C1	2	allele-specific
FCGR2B upstream	256 nt	21825-L30556	C1	1	allele-specific
FCGR2A exon 3	265 nt	21958-L30772	C1	1 *	allele-specific
FCGR2A exon 2	274 nt	21795-L30526	C1	2	
FCGR2C exon 3	283 nt	21810-L30541	C1	2	allele-specific
Reference	292 nt	18491-L23716	C1	2	
FCGR3A exon 5	301 nt	21959-L30773	C1	2	
HSPA6 upstream	319 nt	21802-L30533	C1	2	
FCGR2A intron 4	328 nt	21800-L30531	C1	2	
FCGR2B exon 8	337 nt	21828-L30559	C1	2	
FCGR3B exon 3	346 nt	21821-L30552	C1	1	allele-specific
FCGR2A exon 4	355 nt	21797-L30528	C1	1	allele-specific
FCGR3A intron 4	364 nt	21804-L30535	C1	2	
Reference	373 nt	04278-L03682	C1	2	
FCGR3A/3B exon 3	382 nt	21820-L30551	C1	4	allele-specific
FCGR3A exon 4	392 nt	21866-L31482	C1	2	allele-specific
FCGR2C intron 2	400 nt	21809-L30540	C1	2	allele-specific
Reference	409 nt	16934-L19877	C1	2	
FCGR2C upstream	418 nt	21808-L30539	C1	2	
FCGR2A/2B/2C exon 3 +	436 nt	21968-L30786	C1	1 *	allele-specific
Reference	444 nt	09077-L23425	C1	2	
FCGR2A intron 7	454 nt	21801-L30532	C1	2	
FCGR3A upstream	463 nt	21807-L30538	C1	2	
FCGR2C downstream	474 nt	21815-L30546	C1	2	
Reference	494 nt	19137-L26747	C1	2	

* The indicated copy number is an estimation. The true copy number of SD038 for this probe could not be established with certainty.

+ The probe at 436 nt detects SNPs rs755222686, rs755222686 and rs760608327 on the homologous genes *FCGR2A, FCGR2B, FCGR2C* respectively. On SD038, it is not certain which SNP of the three is present.

Note: Please consult the corresponding probemix product description for more information about exon numbering and gene transcripts used.

Table 2. P111-C1 probe targets in Reference Selection DNA SD038-S03

Gene/Exon	Probe length	Probe ID	Present in probemix version	Copy number	Remarks
Reference	130 nt	19551-L26105	C1	2	
FCGR3B exon 1	137 nt	21840-L30581	C1	2	
FCGR2A exon 1	142 nt	21841-L30582	C1	2	
FCGR2A/2C exon 8	147 nt	21842-L30583	C1	2	allele-specific
FCGR3A intron 3	160 nt	21845-L30586	C1	2	
FCGR3B exon 3	166 nt	21846-L31114	C1	2	allele-specific
Reference	172 nt	16647-L19180	C1	2	
HSPA6 downstream	178 nt	21847-L30588	C1	2	
FCGR2B/2C upstream	182 nt	21848-L31275	C1	4	allele-specific
FCGR2A intron 5	187 nt	21849-L30590	C1	2	allele-specific
FCGR3B exon 5	196 nt	21803-L30591	C1	2	
FCGR2B exon 5	203 nt	21851-L31575	C1	1	allele-specific
FCGR2A/2C intron 7	209 nt	21852-SP1009-L30594	C1	2	allele-specific
FCGR2C intron 3	219 nt	21853-L30595	C1	2	allele-specific
FCGR3A downstream	229 nt	21854-L30596	C1	2	
FCGR2C intron 7	238 nt	21855-L30597	C1	2	allele-specific
FCGR2A exon 3	247 nt	21856-L31576	C1	1	allele-specific
FCGR2B/2C upstream	256 nt	21857-L30599	C1	4	allele-specific
Reference	265 nt	12434-L27286	C1	2	
FCGR2B exon 7	274 nt	21858-L30600	C1	2	
FCGR2B/2C exon 3	283 nt	21859-L30601	C1	2	allele-specific
Reference	292 nt	18491-L23716	C1	2	
FCGR3B exon 5	301 nt	21960-L30774	C1	2	
HSPA7 upstream	320 nt	22377-L31573	C1	2	
FCGR3B exon 3	337 nt	21862-L30605	C1	1 *	allele-specific
FCGR3A/3B exon 3	346 nt	21863-L30606	C1	4	allele-specific
FCGR2A exon 4	355 nt	04814-L10736	C1	1	allele-specific
FCGR3B intron 4	364 nt	21864-L30607	C1	2	
Reference	373 nt	04278-L03682	C1	2	
FCGR3A/3B exon 4	393 nt	21866-L30609	C1	2	allele-specific
FCGR2B/2C intron 2	400 nt	21867-L30610	C1	2	allele-specific
Reference	409 nt	16934-L19877	C1	2	
FCGR2B upstream	418 nt	21868-L30611	C1	2	
Reference	444 nt	09077-L23425	C1	2	
FCGR2C intron 7	454 nt	21870-L30613	C1	2	
FCGR3B upstream	463 nt	21871-L30614	C1	2	
FCGR2A downstream	472 nt	21872-L30615	C1	2	
Reference	490 nt	19137-L25693	C1	2	

Note: Please consult the corresponding probemix product description for more information about exon numbering and gene transcripts used.

* The indicated copy number is an estimation. The true copy number of SD038 for this probe could not be established with certainty

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Implemented changes in the product description

Version S03-01- 19 March 2024 (03)
- Product description completely rewritten and adapted to a new template and to a new version of SD038.
- SD038 is now Reference Selection and Binning DNA.
- Warning regarding CN estimation added for probe at 238 nt in P110-C1 under Table 1.
- Extra warning added about probe at 436 nt in P110-C1 under Table 1.

Version S02-01 – 12 June 2020 (12)
Product description adapted to a new version of SD038.
- Product description completely rewritten and adapted to a new template.
- Information about P110-C1 and P111-C1 added in text on page 1 and in Table 1 and Table 2.
- Information about P110-B2 and P111-B2 removed.

Version S01-02 – 13 July 2016 (10)
- Copy number corrected for P111 FCGR2B/C exon 3a probe at 142 nt in Table 2.
- Lot number removed throughout document.
- Various minor textual and layout changes.

Version S01-01 (05)
- Not applicable, new document.