Product Description SALSA® Binning DNA SD086-S01

Version S01.

Catalogue number: SD086: SALSA® Binning DNA, 6 reactions

To be used with the following SALSA MLPA probemix: ME011-D1 Mismatch Repair Genes, in combination with a SALSA® MLPA® reagent kit, available for various number of reactions. MLPA reagent kits are either provided with FAM or Cy5.0 dye-labelled PCR primer, suitable for Applied Biosystems and Beckman capillary sequencers, respectively (see www.mlpa.com).

Certificate of Analysis: Information regarding storage conditions, quality tests, and a sample electropherogram from the current sales lot is available at www.mlpa.com.

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 or the MS-MLPA General Protocol before use: www.mlpa.com.

Intended use: This SD086 DNA is a Binning DNA sample for the MLPA probemix version as specified above and in Table 1. See Table 1 and the corresponding probemix product description for more details on mutation- and SNP-specific probe targets present. Binning and filtering are the processes of linking a signal to its probe identity by use of the probe length.
Please note that this Binning DNA is a mixture of female genomic DNA from healthy individuals and artificial DNAs of 50-80 nt length not covering the whole exon.

Experimental set up: MLPA reactions for binning purposes should be performed with 5 µl of Binning DNA. Inclusion of one reaction with SALSA Binning DNA SD086 in the initial MLPA experiment is essential as it can aid in data binning of the peak pattern using Coffalyser.Net software. Furthermore, 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).

Data analysis: Coffalyser.Net software must be used for analysis of MLPA experiments. When performing the fragment analysis step in Coffalyser.Net, select SD086 in the *bin smpl* –column. By selecting the SD086 sample as your binning sample, probes will be correctly identified in the peak pattern across all patient samples. Coffalyser.Net software is available free of charge on www.mlpa.com.

Warning: Binning DNA should never be used as a reference sample in the MLPA data analysis. Neither should it be used in quantification of mutation signal. It is strongly advised to use sample and reference DNA extracted with the same method and derived from the same source of tissue.

Binning DNA content: MRC-Holland is unable to provide mutation and SNP positive human DNA samples. As an alternative, we have prepared a mixture of female genomic DNA from healthy individuals and a titrated amount of synthetic DNAs that contain the target sequences recognised by the mutation- and SNP-specific probes present in the MLPA probemix version as specified above and in Table 1.

The synthetic DNA included in the SD086 DNA contains partial sequences of the *BRAF* and *MLH1* genes. These sequences include one mutation and one SNP which will be detected by MLPA probes that are present in the aforementioned probemix version (for details, see Table 1) and will generate mutation- and SNP-specific signals for these probes.

Please note that the synthetic DNA contains the target sequences detected by the above mentioned probes and the sequence of the 105 nt chromosome Y specific control fragment. The amount of synthetic DNA in this Binning DNA (relative to the genomic DNA) results in a relative probe signal for the 105 nt probe on this female DNA which is similar to the relative probe signal obtained on male DNA samples. As a result, the 100 and 105 nt control fragments indicate the presence of two copies chromosome X and one copy chromosome Y.

Storage and stability: Upon arrival, Binning DNA must be stored between -25 °C and -15 °C, in the original packaging. When stored under the recommended conditions, a shelf life of at least 1 year is guaranteed, also after opening. The expiry date is mentioned on the label of the vial.

Table 1. Mutation- and SNP-specific probe targets in SD086-S01 Binning DNA

Probemix	Gene/Exon	Probe length	Probe ID	Present in probemix version	Details
ME011	BRAF exon 15	226 nt	08780-SP0039-L08904	D1	c.1799T>A; p.Val600Glu
	MLH1 exon 1[i) ii)]	289 nt	22572-L31773	D1	SNP rs104894994 (C>T)

i) The rs104894994 SNP detected by 289 nt SNP-specific probe (22572-L31773) is located at the HhaI enzyme recognition site of 172 nt *MLH1* methylation-specific probe (01686-L28585), and therefore, in the *digested MS-MLPA reaction* 33% residual signal is expected on SD086.
ii) The target sequence of 289 nt rs104894994 SNP-specific probe (22572-L31773) largely overlaps with the target sequence of the 172 nt methylation-specific probe (01686-L28585), resulting in increased signal (one additional copy) of 172 nt probe on SD086 (ratio 1.3-1.65 expected) in the *undigested MS-MLPA reaction*.

Note: Mutation nomenclature and exon numbering used here may differ from literature! Please notify us of any mistakes: info@mlpa.com. Please consult the respective probemix product description to find corresponding gene transcripts.

More information: www.mlpa.com; www.mlpa.eu	
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IVD	EUROPE* CE
RUO	ALL OTHER COUNTRIES

*comprising EU (candidate) member states and
members of the European Free Trade Association (EFTA).
The product is for RUO in all other European countries.

Implemented Changes – compared to the previous SD086 product description versions
Version S01-01 – 22 April 2020 (02) - Not applicable, new document.