

Product Description

SALSA® FFPE Solution

Catalogue number

- **SMR05:** 10 ml SALSA FFPE Solution. Sufficient for 50 reactions.

General information

The SALSA FFPE Solution is used to extract DNA from formalin-fixed paraffin-embedded (FFPE) tissue samples. DNA extraction is performed by a simple method developed at MRC Holland called *one-tube FFPE-extraction* (described in Atanesyan L et al. 2017), which produces protease-digested crude tissue lysates suitable for direct use in a conventional MLPA reaction.

The SALSA FFPE Solution is sold by MRC Holland for research use only (RUO). Purchase of this product includes a limited license for research purposes. This product is not IVD registered for use in diagnostic procedures.

Ingredients

50 mM Tris-HCl pH 8.5, 100 mM NaCl, 1 mM EDTA, 0.5% TWEEN 20, 0.5% NP-40, ultrapure H₂O

Instructions for use

1. Thaw the SALSA FFPE Solution (SFS) and mix well before use.
2. Cut three 10 µm sections (a total of 30 µm with a tissue surface area of 50-100 mm²)¹ from the FFPE block and place them in 1.5 ml screw cap tubes.
3. Add 200 µl of SFS² and incubate at 90°C for 15 min. After 5 minutes, vortex and briefly spin down to make sure that paraffin sections are fully immersed in the SFS. Continue with incubation at 90°C.
4. Let the samples cool down to room temperature. Add proteinase K³ solution (up to 20 µl) to reach a final concentration of 1 mg/ml and allow protein digestion at 55°C overnight (~16 hrs).
5. After overnight digestion, incubate the sample for 15 minutes at 80°C to inactivate proteinase K.
6. Centrifuge for 10 minutes at 13,000 rpm to pellet solid particles if present and transfer the supernatant to a clean tube⁴.
7. Use 2-5 µl of supernatant for each MLPA reaction⁵.
8. If long term storage of DNA is desired or when the presence of inhibitory substances is suspected, the sample can be further purified using the "DNA Clean & Concentrator" kits (Zymo Research) or an equivalent purification kit.

Notes:

¹ The amount of tissue needed for DNA extraction might vary depending on the cellularity of the tissue. For most tissue types 30 µm suffice, however, for healthy breast tissue a total of 100 µm with a tissue surface area of 50-100 mm² is recommended.

² The amount of SFS can be reduced to 100 µl when there is insufficient tissue sample available.

³ The volume of added proteinase K should be no more than 20 µl.

⁴ Depending on FFPE tissue sections, the supernatant might have a yellow or brown colour and might not be clear. This DNA solution should be stored at 4°C and can be used for up to two weeks; freeze-thawing may result in precipitates.

⁵ DNA concentration measurement prior to MLPA is recommended using Qubit or other fluorometric quantitation method.

Storage and shelf life

The SALSA FFPE Solution must be stored directly upon arrival at -15°C to -25°C in the original package. When stored under the recommended conditions, a shelf life of at least 1 year is guaranteed. See the label on the reagent vial for the expiry date.

Materials required but not provided

- 1.5 or 2.0 ml screw cap tubes (or other tubes that can be securely closed)
- proteinase K enzyme (Proteinase K 14-22 mg/ml solution; cat no. 03115887001, Roche; was used for internal testing and validation)
- heating block or equivalent device capable of incubation at 90°C and 55°C
- centrifuge and other laboratory equipment as required.

Safety data sheet

None of the ingredients are derived from humans, animals, or pathogenic bacteria. 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.

References

Atanesyan L et al. 2017, *Am J Clin Pathol.* 147:60-8. Optimal Fixation Conditions and DNA Extraction Methods for MLPA Analysis on FFPE Tissue-Derived DNA

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Implemented changes in the product description
<p><i>Version 02 – 14 September 2020</i></p> <ul style="list-style-type: none"> - Edited the citation of Atanesyan et al in the first paragraph and moved full reference to a separate section at the end - Moved RUO note to the General information section. - Textual changes for point 4 and 6 in the instructions for use. - Added a note (2) about SFS volume reduction. - Added a note (3) about the maximum amount of added proteinase K. - Added a note (5) about the DNA concentration measurement. <p><i>Version 01 – 13 February 2017</i></p> <ul style="list-style-type: none"> - Not applicable, new document.