

Milenia GenLine

HybriDetect RPA basic Kit

REF	SIZE	VOLUME	COMPONENT	COMPONENT COMPOSITION
MGHRB 1	96 reactions	96 x cake 3 x 1.0 ml 3 x 0.1 ml 96 x caps	LyoBead RPA basic 2X RPA Reconstitution Buffer X 20X RPA Reaction Initiator Caps for LyoBead	Freeze-dried RPA-Mix for 50 µl reaction volume (Note: protect from moisture) Reconstitution and Reaction Buffer for RPA Master Mix Initiator for starting RPA amplification process Strip of caps for reaction tubes (PP, highly transparent, flat cap, suitable for qPCR)

Storage: 2-30 °C

not for diagnostic purposes

APPLICATIONS

- ▼ RPA – Recombinase Polymerase Amplification
- ▼ Perfect for low resource settings
- ▼ Compatible with further detection strategies such as CRISPR/Cas
- ▼ Directly compatible with our universal HybriDetect lateral flow strips for fast and easy evaluation

BENEFITS

- ▼ Rapid DNA amplification under isothermal conditions without the need for thermal cycling
- ▼ Efficient 20-minute DNA amplification at constant temperature (37–42 °C)
- ▼ Robust on complex templates and crude samples
- ▼ Ideal for point-of-need and field applications due to simple workflows and minimal equipment requirement

PRODUCT DETAILS

The Milenia GenLine HybriDetect RPA basic Kit is a high-performance, ready-to-use solution for rapid isothermal DNA amplification. Operating at a constant temperature between 37 °C and 42 °C, it eliminates the need for thermal cycling while enabling sensitive DNA amplification and detection within 10–30 minutes. This fast turnaround time makes it an ideal choice for time-sensitive molecular testing workflows. Supplied in a lyophilized, pre-formulated format, the master mix is stable during ambient shipping and storage, eliminating the need for cold chain logistics. Its robust formulation facilitates reliable use in point-of-need, mobile, and field-based environments where refrigerated storage may not be available. Thanks to its exceptional robustness and flexibility, the Milenia GenLine HybriDetect RPA basic kit is well suited for diverse molecular biology applications, including clinical research, veterinary and agricultural testing, food and environmental monitoring, and other workflows requiring rapid, reliable isothermal DNA amplification.

COMBINATION WITH LFA

- ▼ Combination of RPA and LFA allows you to develop your own on-site testing system
- ▼ You get all the components from a single source
- ▼ Well-established method (> 200 publications on RPA and our HybriDetect lateral flow test strips)
- ▼ Easy to adapt if you want to switch from a regular RPA to RPA with lateral flow evaluation.
- ▼ Only 5'-end labelled primer pairs are needed, no change in sequence is necessary. Labels depend on the LFA kit
- ▼ Easy to evaluate even for untrained people
- ▼ Evaluation time for lateral flow readout 2–5 minutes

ISOTHERMAL AMPLIFICATION PROTOCOL EXAMPLE

- ▼ Take typical measures to prevent contamination, keep your bench clean, wear gloves, use sterile tubes and filter pipet tips.
- ▼ Include a no-template control and positive controls in parallel.
- ▼ Mix components well before use.
- ▼ Prepare the complete reaction mixture in the reaction tube without adding the Initiator. Pipette 2.5 µl of the 20X RPA Reaction Initiator onto the inside of the tube lid, taking care not to mix it with the reaction mixture at this stage. Close the tube securely and briefly centrifuge it in a mini centrifuge to combine the Initiator with the reaction mixture and initiate the reaction.
- ▼ Perform the reaction at 37–42 °C. Lower temperatures are also possible but will yield lower copy numbers.
- ▼ The suggested reaction time is 10–30 minutes.
- ▼ For evaluation with our lateral flow kits, use labelled primer pairs (see Instructions for Use for details).
- ▼ If the assay does not provide sufficient target specificity, an additional target-specific probe compatible with endonuclease IV (Nfo) recognition should be designed (see Instructions for Use for details).

1. Prepare a 50 µl reaction

- LyoBead RPA basic	cake
- 2X RPA Reconstitution Buffer X	25 µl
- Primers and Probes	variable
- Template DNA	variable
- Nuclease free water	add up to 47.5 µl

Mix gently and transfer the complete volume of the mix to a reaction tube of your choice. Alternatively, keep the mix in the original tube and use the provided lid. Then add to the lid:

- 20X RPA Reaction Initiator	2.5 µl
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Total volume **50 µl**

- 2. Spin down** the Reaction Initiator. The reaction starts immediately.
- 3. Incubate** at 37–42 °C for 10–30 min
- 4. Evaluation**
 - Agarose Gel Electrophoresis
 - Lateral Flow strip (see Instructions for Use for details)

All HybriDetect RPA Kits are directly compatible with our universal HybriDetect lateral flow kits (MGHD 1, MGHD2 1 and MGHC 1) for easy and fast evaluation.

Note: Laboratory Chemical - not for diagnostic purposes. The use of this product in certain applications may be covered by patents. The user has to analyse all applicable Limited Use Label Licenses and may need licensing for certain cases.