

# LyoRNA™ Master Mix

**Biomeme LyoRNA™ Master Mix (Product code 300004)** is a lyophilized master mix containing core reaction components for fluorescent probe-based reverse transcription polymerase chain reaction (RT-PCR) analysis of RNA/DNA targets.

A proprietary blend of stabilizers and macromolecules, **Biomeme LyoRNA™ Master Mix** includes reaction buffer, magnesium ions, dNTP nucleotides, Taq DNA polymerase and a thermostable MMuLV RNA-dependent DNA polymerase. Add the Master Mix to oligonucleotide primers and probes (not supplied) for a complete RT-PCR reaction mix.

**Biomeme LyoRNA™ Master Mix** is supplied as a dry reagent to be reconstituted in water. A freeze-drying process ensures it is stable at ambient temperatures and does not require refrigeration for transport or storage.

**Biomeme LyoRNA™ Master Mix** is formulated for 5' nuclease signaling, providing 5 mM magnesium ions in final reaction mix. For additional Mg<sup>++</sup>, MgCl<sub>2</sub> solution (not supplied) can be supplemented for diluent.

## Technical Specifications

Specification	Dimension
DNA-dependent DNA polymerase	Hotstart Taq polymerase (1 min. activation @ 95°C)
RNA-dependent DNA polymerase	Thermostable RNase H+ recombinant MMuLV (1-2 min. RT step @ 40-55°C)
Nucleotides	Proprietary mix of dNTPs, incl. dUTP
Buffer	Tris pH 8.8 Salts and enhancers for 5' nuclease assays
Mg <sup>++</sup>	5 mM
Storage	15-30°C
Shelf life	18 months
Dissolution time	<1s
BSA	Certified BSE free. Contains Bovine Serum Albumin of USA origin.

## Reconstitution Volumes

Master Mix conc. sought	Diluent volume to add
10X	135 µL
5X	270 µL
2X (typical application)	675 µL

## Storage

**Biomeme LyoRNA™ Master Mix** should be stored in its original packaging at 15-30°C. If opened, the dry reagent resists high humidity for up to one hour. Once reconstituted in water, it will remain stable for 24 hours if refrigerated at 2-8°C.

To store long-term, resuspend to 2X concentration with a diluent containing 8-16% (by volume) molecular biology-grade glycerol. Store at -20°C.

## Example Protocols

To use **Biomeme LyoRNA™ Master Mix**, gently tap the glass vial to settle the freeze-dried contents and unscrew the cap. Resuspend the dry reagents and mix with diluent and target-specific primers and probes. Examples of experimental protocols are provided below.

Once all components are combined, the 2X reaction mix is aliquoted into PCR reaction tubes (see: **Biomeme 3-well Strips**). Template nucleic acids are added and the tubes are ready for thermocycling and analysis. Non-template controls may use water to substitute template DNA or RNA.

## Disclaimer

**This product is for Research Use Only.** Biomeme LyoRNA™ Master Mix may not be used for any other purpose, including but not limited to use in therapeutics, drugs, in vitro diagnostics or human health. Biomeme products may not be transferred to third parties, resold, modified for resale or used to manufacture commercial products or to provide a service to third parties without written approval of Biomeme, Inc.

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2X reaction mix guide for 50 x 20 µL PCR reactions	For 5 µL template nucleic acid per reaction	For 10 µL template nucleic acid per reaction
Biomeme RNA Master Mix	500 µL of 2X resuspension	200 µL of 5X resuspension
20X Primer & Probe Mix (target-specific; not supplied) Forward primer Reverse primer Dual-labelled hydrolysis probe / Molecular Beacon	e.g., 50 µL of 20X mix	e.g., 50 µL of 20X mix
Diluent (typically nuclease-free water)	200 µL	250 µL
<b>TOTAL VOLUME</b>	750 µL	500 µL
Volume of reaction mix to aliquot into each reaction tube	15 µL	10 µL