

## ProbeMaster® Lyo ROX, 5x

<http://www.lumiprobe.com/p/probemaster-mix-rox-lyo>

ProbeMaster® Lyo ROX is a lyophilized reaction mixture containing all the necessary components for quantitative PCR using intercalating dyes or hydrolyzable probes. Its composition is optimized to achieve ideal results with a low threshold cycle and a high signal-to-background ratio. The ready-to-use reaction mixtures reduce the risk of sample contamination. To reconstitute the mixture into a liquid form, add the specified amount of water.

The ProbeMaster® Lyo ROX reaction mixture allows you to solve a large number of tasks with minimal time costs. Due to the presence of the [ROX](#) reference dye, the mixture is suitable for accurately determining the DNA template content in the sample. It can be used for quantitative analysis, gene expression determination, genotyping, SNP detection, and other applications.

## Reaction mixture composition

- HS Taq DNA polymerase;
- Deoxynucleoside triphosphate mixture;
- PCR buffer (contains Mg<sup>2+</sup>);
- ROX reference dye;
- Cryoprotectants

## Key characteristics

- One tube of lyophilized mixture, after dilution in 450 µL of water, is sufficient for 100 reactions of 25 µL each.
- The mixture is completely ready for use. To set up the reaction, you only need to add the intercalating dye or probe for detection of the amplification product, the DNA sample, primers, and water.
- The mixture is suitable for PCR of fragments up to 3000 bp, with no more than 70% GC content, and does not require high-precision amplification. Genomic, viral, plasmid DNA, etc., can be used as a template.
- The reaction mixture contains Taq polymerase with "Hot-Start" technology. The HS Taq DNA polymerase used is a complex of monoclonal antibodies with the enzyme. Heating the sample during the first PCR cycle inactivates antibodies in the complex and activates the enzyme. The "Hot-Start" technology prevents nonspecific amplification and primer dimers.
- The HS Taq DNA polymerase included in the mixture possesses 5'-3' polymerase, 5'-3' exonuclease, and adenyltransferase activity.
- For fluorescence detection, use a DNA probe labeled with a fluorophore and a quencher (hydrolyzable probes, "molecular beacons", "scorpion" type primers), or two probes labeled with fluorophores forming a FRET pair.
- The [ROX](#) reference dye included in the mixture allows normalization of probe and intercalating dye fluorescence intensities, such as [dsGreen](#). The ROX concentration has explicitly been optimized for use with most real-time PCR machines on the market.
- Does not contain UDG and dUTP.
- The mixture is suitable for applications where uracil-containing amplification products cannot be used.

## Equipment compatibility:

The ProbeMaster® Lyo ROX reaction mixture is compatible with most real-time PCR machines, including those manufactured by Applied Biosystems (7300, 7500, 7500 Fast, 7900HT, QuantStudio 12k Flex, QuantStudio 3, QuantStudio 5, QuantStudio

## PCR reaction mixture selection table

Name	Reaction mixtures for quantitative PCR (RT-PCR)				Application
	dsGreen	Eva488	ROX	UDG, dUTP	
<a href="#">ProbeMaster® Lyo UDG Cat.# •0514</a>	—	—	—	✓	qPCR with DNA probes or intercalating dye
<a href="#">ProbeMaster® Lyo ROX Cat.# •0114</a>	—	—	✓	—	
<a href="#">ProbeMaster® Lyo Eva488 Cat.# •0614</a>	—	✓	—	—	
<a href="#">ProbeMaster® Lyo Eva488 ROXCat.# •0714</a>	—	✓	✓	—	
<a href="#">ProbeMaster® Lyo dsGreen Cat.# •0814</a>	✓	—	—	—	
<b>Reaction mixture for standard PCR</b>					
<a href="#">ProbeMaster® Lyo GEL Cat.# •0024</a>	—	—	—	—	PCR followed by gel electrophoresis analysis, contains dye for application to gel
<a href="#">ProbeMaster® Lyo GEL UDGCat.# •0524</a>	—	—	—	✓	
<b>Universal reaction mixture</b>					
<a href="#">ProbeMaster® Lyo UNI Cat.# •0534</a>	—	—	—	—	qPCR with DNA probes/intercalating dye or standard PCR followed by gel electrophoresis analysis

### General properties

Appearance: pink tablet

Solubility: water

Quality control: functional test

Storage conditions: Storage: 12 months (from the date of delivery) at 4 °C.

Transportation: up to 21 days at a temperature of up to 25 °C.

After reconstitution into liquid form, store at 4 °C for up to 30 days or freeze and store at -20 °C within the expiration date. The reconstituted mixture may undergo up to five freeze-thaw cycles.

Legal statement: This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

ProbeMaster® is a registered trademark of Lumiprobe.