

ProbeMaster® Lyo UNI, 5×

<http://www.lumiprobe.com/p/pcr-qpcr-master-mix-lyo>

ProbeMaster® Lyo UNI is a ready-to-use lyophilized reaction mixture containing all the necessary components for polymerase chain reaction (PCR). To reconstitute the mixture into liquid form, add the specified amount of water.

The ProbeMaster® Lyo UNI mixture is suitable for both real-time PCR and DNA amplification followed by electrophoresis detection. Because UDG/dUTP is not included in the composition, this mixture can be used for routine cloning and other applications that require further use of the PCR product after amplification.

Reaction mixture composition

- HS Taq DNA polymerase;
- Deoxynucleoside triphosphate mixture;
- PCR buffer (contains Mg²⁺);
- 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 ready for use, reducing the risk of sample contamination and significantly reducing setup time for the reaction. For standard PCR (with subsequent analysis by gel electrophoresis), only the DNA sample, primers, and water need to be added to the mixture. For quantitative PCR, an intercalating dye or probe to detect the amplification product, a DNA sample, primers, and water must be added to the mixture.
- 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. In addition to DNA probes, the intercalating dye [dsGreen](#) can be used for fluorescence detection.
- Suitable for PCR fragments up to 3000 bp in length, with no more than 70% GC content, and not requiring 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 in the first PCR cycle inactivates the antibodies in the complex and activates the enzyme. The "Hot-Start" technology prevents non-specific amplification and primer dimer formation.
- The HS Taq DNA polymerase included has 5'-3' polymerase, 5'-3' exonuclease, and adenyltransferase activities, allowing the use of PCR products for TA cloning.
- Does not contain UDG and dUTP.

Applications

Quantitative PCR (qPCR) using intercalating dyes such as dsGreen or hydrolyzable probes, standard PCR (with subsequent analysis by gel electrophoresis), PCR after prior cDNA synthesis, genotyping, colony PCR, product generation for TA cloning, etc.

Equipment compatibility

Compatible with any thermocycler.

PCR reaction mixture selection table

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

General properties

Appearance: white tablet

Solubility: water

Quality control: functional test

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

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