

Data sheet

This data sheet provided for information only

2X MasTaq^{UH}-1525**RESEARCH USE ONLY****Ready-to-use amplification MasterMix**

Cat.No.	Pack	Conc.	DESCRIPTION
Dia-07120	100 rnx	2 X	<p>2X MasTaq^{UH} is a ready-to-use premix of all components for amplification of target DNA, contains stabilizer/enhancer, which improves thermostabilization of enzyme during PCR amplification and storage.</p> <p>2X MasTaq^{UH} contains special blend of antibodies-blocked polymerases, which are not active at ambient temperature (during PCR set-up) and activated automatically during the first PCR cycle at the temperature >70°C, preventing miss-priming and other artifacts formation.</p> <p>It is no need for prolonged heating for activation of enzyme for PCR.</p> <p>2X MasTaq^{UH} contains optimized buffer reagents which greatly improve specificity of PCR with complex, low-copy number DNA templates, multiplex PCR, "real-time" PCR, allowing to use very small initial quantities of DNA template.</p> <p>One can use an appropriate volume of 2X MasTaq^{UH} for amplification reaction, depending on total final reaction volume.</p> <p>Just place it into the tube/plate adds primers and template of choice mix all components and run PCR.</p> <p>After PCR reaction running mix 5-10µl of reaction mixture with appropriate volume of "Loading Buffer" (for non-"real-time" mode PCR), apply to the gel and run electrophoresis.</p>
Dia-07121	500 rnx	2 X	

Stability:

2X MasTaq^{UH} stable for 24 months at -20°C, or for 6 months at +4°C storage without freezing.

CONTENT:

1X: UniHot Polymerase

0.2mM each of dNTP's

1,5 mM MgCL₂

Reaction Buffer components

Stabilizer/enhancer

Recommended PCR assay

50µl PCR assay		Final Conc.
25µl	2X MasTaq^{UH}-1525	1X
0.2-1µM	each Primer	
Variable*	DNA Template	
To 50µl	PCR Grade Water	

*- depending on DNA template initial concentration

APPLICATIONS:

- Routine PCR
- Primer extension
- Real-Time PCR (all types)
- Low-copy PCR (UniHot Polymerase)
- Multiplex PCR

STORAGE CONDITIONS :

Store **2X MasTaq^{UH}** at -20°C (for long-term storage).

SHIPPING CONDITIONS:

Should be shipped at ambient temperature

For long distance shipments preferably in **Blue Ice**

General Protocol for amplification with 2X MasTaq^{UH}-2025

Add and mix the following components:

Component	50 μ L reactions	25 μ L reactions	Final concentration
PCR grade Water	Up to 50 μ L	Up to 25 μ L	
2X MasTaq^{UH}-1525	25 μ L	12.5 μ L	1X
Primers			0.3-0.5 μ M each
Template DNA	optionally	optionally	1-10ng

In some cases, we recommend to optimize Mg concentration in the range 2.0-3.0mM
We recommend using 25 μ l reaction for the PCR with **2X MasTaq^{UH}**

Cycling Protocol:

Cycle step	3-step amplification		Cycles
	T ^o C	Time	
Initial Denaturation	95^oC	1-2 min	1
Denaturation	95^oC	10 S	
Annealing	55-66*	5-10 S	25-35
Extension	72^oC	15 Sec/Kb**	
Final extension	72^oC	1-2 min	1
	4^oC	hold	

*Optimal T_m for the primer pair recommended as T_m of the lower primer, for the standard oligos <20nt.

To optimize amplification we recommend using gradient PCR amplification, to reach final amplification conditions in the short time.

**For non-complex DNA templates (plasmid DNA, phage DNA, BAC clone) extension time could be reduced up to 15 sec/Kb.

For complex DNA, templates (human DNA) strongly recommended to apply Extension time as 30 sec/Kb for the targets more than 1,5Kb