# *Super-AMP Universal SINGLE TUBE 2.5X- RT/PCR PREMIX*

***(Mg final Conc. 4 mM) { Suitable for PCR/Real Time PCR}***

**Cat No.110209**

***DATA-SHEET***

Ready to use pre-mixes are the innovation for convenience of your routine PCR as you just have to add your template RNA/DNA besides your primers & put the tubes for amplifications. These pre-mixes are optimized for most of the PCR templates. However amplifications may vary for different templates, hence Mg Concentration needs to be adjusted for further optimization. We are proud to Introduce our Super-AMP Universal Single Tube 2.5 X RT/PCR premix which will not only save you lot of time & money but will also help in controlling cross contaminations as cDNA synthesis & subsequent PCR can be done in the same tube without opening the tubes till the final amplification process.

Super-AMP Universal Single Tube 2.5X RT/PCR PRE-MIX is an optimized, stabilized, ready to use mixture of ***blended M-Mulv***, Hot Start *Taq DNA polymerase*, RT/PCR buffer, $MgCl_2$ and dNTP's besides certain additives for enhanced amplifications. This 2.5X Single tube RT/PCR pre-mix performs cDNA synthesis & then subsequent PCR from a RNA template. The mixture is suitable for cDNA synthesis & subsequent amplification of most of the RNA templates for Conventional Single tube RT/PCR or Real Time Single tube RT/PCR. This premix is tested for absence of endo & exo nucleases and is ***also tested for amplification of single gene copy***.

**CONTENTS OF THE PACK :**

| | | |
|---|---|---|
| Super-AMP Universal | Single tube 2.5X RT/PCR-Premix | 1.0 ml x 2 vials (for 100 reactions of 50µl) |
| | Mol. Grade water | 1.0 ml - 1 Vial |

***NOTE: It is not advisable to Freeze thaw the premix time & again. If the premix is to be used in several batches then it is advisable to prepare aliquots & store at -20 °C.***

**Mol grade water :** Water is supplied in 1.0 ml quantity, which is RNAse and DNAse free. Advisable to aliquot the Mol. Grade water.

**SPECIFICATIONS :** Supplied as 2.5X in liquid form so as to ensure that you can add your primers & Template RNA volumes, to desired levels.

**Storage Conditions :** Recommended storage temperature is -20 °C.

**DILUTION PROTOCOL for Super-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:**

| **Component** | **50 µl reaction Volume** | | **25 µl reaction volume** | |
|---|---|---|---|---|
| | **Volume** | **Final Conc.** | **Volume** | **Final Conc.** |
| 2.5 X Super-Amp RT/PCR Premix | 20 µl | 1 X | 10 µl | 1 X |
| Forward primer | Variable | 0.1-1 µM | Variable | 0.1-1 µM |
| Reverse Primer | Variable | 0.2-1 µM | Variable | 0.2-1 µM |
| Template RNA | Variable | 10pg-1 µg | Variable | 10pg-1 µg |
| Sterile Deionized water | Up to 50 µl | ---- | Up to25 µl | ---- |

***NOTE: -- Please use Gene specific primers for cDNA synthesis as well as for PCR.***
***-- It is advisable to use 20µl of extracted template RNA in case low yield is expected for 50µl reaction volumes. In case of High yields the volumes can be adjusted as per the yield of RNA.***

**Manufactured and Marketed By :**

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**Suggested cycling protocol :**

| | | | |
|---|---|---|---|
| cDNA Synthesis | 50°C | 15 minutes | |
| Initial Denaturation | 95°C | 5 minutes | |
| Cycling | 95°C | 20 secs | 40 – 45 cycles |
| | Annealing | 30 secs | |
| | 72°C extension | 30 secs | |
| Final Extension | 72°C | 5 minutes | |

***Note:*** ***-- In case of long or highly structured templates the initial cDNA synthesis step can be extended to 30 minutes.***
***-- In case of gene specific primers if the Tm of the primers is above 55℃ then the cDNA synthesis can be performed at 55℃ also for 15 minutes.***
***-- In case of low copy number the Cycling can be extended to 45 Cycles.***

**Packing :** The above Super-AMP Universal Single Tube 2.5X RT/PCR PRE-MIX is available in convenient small packs as well as large packs for bulk users.

The Super-AMP Universal Single Tube 2.5X RT/PCR PRE-MIX is supplied with an additional vial of DNase free water. Also RT/PCR Pre-mixes with various concentrations of $MgCl_2$ are available as mentioned below. Generally 2.5mM RT/PCR Pre-mix is considered as universal.

**Pack size available :**

| Cat. No. | Product | Pack Size |
|---|---|---|
| 110201 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 50 reactions of 50µl or 100 reactions of 25µl 1.5 mM final Mg at 1 X Conc. | 1ml (50 rxns 50µl) |
| 110202 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 100 reactions of 50µl or 200 reactions of 25µl 1.5 mM final Mg at 1 X Conc. | 1ml x 2 (100 rxns 50µl) |
| 110203 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 50 reactions of 50µl or 100 reactions of 25µl 2.5 mM final Mg at 1 X Conc. | 1ml (50 rxns 50µl) |
| 110204 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 100 reactions of 50µl or 200 reactions of 25µl 2.5 mM final Mg at 1 X Conc. | 1ml x 2 (100 rxns 50µl) |
| 110205 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 500 rxns of 50µl or 1000 reactions of 25µl 2.5 mM final Mg at 1 X Conc. | 1ml x 10 (500 rxns 50µl) |
| 110206 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 50 reactions of 50µl or 100 reactions of 25µl 3.5 mM final Mg at 1 X Conc. | 1ml (50 rxns 50µl) |
| 110207 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 100 reactions of 50µl or 200 reactions of 25µl 3.5 mM final Mg at 1 X Conc. | 1ml x 2 (100 rxns 50µl) |
| 110208 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 50 reactions of 50µl or 100 reactions of 25µl 4 mM final Mg at 1 X Conc. | 1ml (50 rxns 50µl) |
| 110209 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 100 reactions of 50µl or 200 reactions of 25µl 4 mM final Mg at 1 X Conc. | 1ml x 2 (100 rxns 50µl) |
| 110210 | **SUPER-AMP Universal SINGLE TUBE 2.5 X RT/PCR-Premix:** 100 reactions of 50µl or 200 reactions of 25µl 5 mM final Mg at 1 X Conc. | 1ml x 2 (100 rxns 50µl) |

**NOTE :** For research use only. Not for use in Diagnostic or therapeutic procedures.
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