Azura 2x Taq Red Mix

Catalog No.	Pack Size and Concentration	Components and Volume
AZ-1322	200 x 50 µl reactions, 2x	2x Taq Red Mix - 4 x 1.25 mL
AZ-1325	1000 x 50 µl reactions, 2x	2x Taq Red Mix - 20 x 1.25 mL
AZ-1326	2000 x 50 µl reactions, 2x	2x Taq Red Mix – 10 x 5 mL

Description

Azura 2x Taq Red Mix is a robust, ready-to-use single tube formulation optimized for convenience and reduced pipetting steps. The highly advanced Azura 2x Taq Red Mix chemistry allows fast cycling conditions to be used with greater efficiency and reproducibility. The ready-to-use mix contains an inert red dye which allows samples to be loaded directly onto agarose gels without additional gel loading buffers. The red dye migrates at the same rate as 600 bp DNA fragments and 350 bp DNA fragments in 1% and 2% agarose gels, respectively. Azura 2x Taq Red Mix is sufficiently dense to sink to the bottom of the agarose gel wells.

- New-generation PCR formulation including PCR enhancers for maximum efficiency, sensitivity and reaction speed.
- Robust PCR performance across a wide range of DNA templates including genomic DNA and GC-rich DNA motifs.
- Supplied as a ready-to-use 2x master-mix for maximum convenience and minimal liquid handling.
- High-yields with amplicons up to 5 Kb with standard or fast cycling.

Storage

Azura 2x Taq Red Mix is shipped on blue ice and should be stored at –20°C upon receipt. Excessive freeze/thawing should be avoided.

Important Guidelines

Azura 2x Taq Red Mix: The 2x Mix is comprised of Azura Taq DNA Polymerase, 2 mM dNTPs, 6 mM $MgCl_2$, inert red gel-loading dye and PCR enhancers for maximum efficiency, sensitivity and success with difficult amplicons. We do not suggest the use of additional PCR enhancers.
Template: For complex genomic DNA, we suggest the use of 5 ng – 500 ng per reaction; For cDNA or plasmid DNA, please use < 100 ng per reaction.
Primers: Primers should have a predicted melting temperature of around 60°C, using default Primer 3 settings (http://frodo.wi.mit.edu/primer3/). The final primer concentration in the reaction should be between 0.2 µM and 0.6 µM.
Annealing: We strongly recommend performing a temperature gradient to determine the optimal annealing temperature. Alternatively, 55°C can be used as a starting point. For optimization, increase in 2°C increments. Azura 2x Taq Red Mix contains a proprietary enhancer which may alter the optimal annealing temperature in comparison with traditional PCR buffers and master-mixes.
Extension: Optimal extension is achieved at 72°C. The optimal extension time is dependent on amplicon length and complexity. 45 seconds per kilobase (Kb) is recommended for amplification from eukaryotic genomic DNA or cDNA.

Reaction setup – Allow Azura 2x Taq Red Mix to thaw and mix contents thoroughly by pipetting up and down gently.

1. Prepare a PCR master mix on ice based on following table:

Component	50 µl Reaction	Final Concentration/Notes
Azura 2x Taq Red Mix	25 µl	1x
Forward Primer (10 µM)	2.0 µl	400 nM
Reverse Primer (10 µM)	2.0 µl	400 nM
Template DNA	<100 ng cDNA, <500 ng genomic DNA	variable
PCR-grade water	Up to 50 µl final volume	

* For alternative total reaction volumes (eg. 20 µl), scale all components proportionally to maintain final concentrations.

2. PCR cycling:

Cycles	Temperature & Time	Notes
1	95°C, 1 minute	Initial Denaturation
25 - 40	95°C, 15 seconds 55°C to 60°C, 15 seconds 72°C, 45 seconds per Kb	Denaturation Annealing* (determined by user) Extension

* We suggest performing a temperature gradient to determine the optimal annealing temperature. See Important Guidelines.

Quality Control

Azura 2x Taq Red Mix is tested extensively for robust activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination. Azura 2x Taq Red Mix is manufactured under a comprehensive quality management system, following ISO 9001:2008 standards.

Limitations of Use

This product is intended for research purposes only and is not intended for any animal or human therapeutic use.

Technical Support

For Trouble-shooting and Technical Guidance, please contact us at tech@azuragenomics.com and provide PCR reaction conditions, cycling parameters, amplicon size, and screen grabs (gel images) if possible.