DATA SHEET

Jena Bioscience

Ruby Hot Start Master (2x)

Red master mix for highly sensitive and specific PCR, direct gel loading
Ready-to-Use Mixes for PCR

Cat. No.	Amount
PCR-165S	4 x 1,25 ml (2x conc.)
PCR-165L	20 x 1.25 ml (2x conc.)
PCR-165XL	100 ml (2x conc.)

For *in vitro* use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Additional Storage Conditions: Short term storage (up to 3 month) at 4 °C possible.

Shelf Life: 12 months

Form: liquid

Concentration: 2x conc.

Description:
Ruby Hot Start Master is a 2 x conc. ready-to-use master mix with blocked polymerase activity at ambient temperature.
The master mix is recommended for routine PCR applications, high throughput PCR or genotyping and provides an improved specificity and sensitivity when amplifying low-copy-number targets, working with complex backgrounds or when prolonged room-temperature set-ups are unavoidable.
The thermal activation at the onset of the initial denaturation prevents the extension of nonspecifically annealed primers and primer-dimer formation at low temperatures during PCR setup.
It contains all reagents required for PCR (except template and primer) in a well-balanced ratio to ensure high specificity and minimal by-product formation in almost all PCR applications without the need of additional optimization steps.
Ruby Hot Start Master contains an inherent red dye and gel loading buffer allowing an easy visual control during PCR set-up and the direct loading of the reaction product into the gel.
The mix guarantees robust and reliable amplification results with a minimum of pipetting steps, saves time and reduces the risk of contaminations.
The total PCR assay volume is freely adaptable to individual protocols or the requirements of automated pipetting systems.

Content:

Cat.No.	Master Mix	PCR-grade water	Assays x 50 µl
PCR-165S	4 x 1.25 ml	6 ml	200
PCR-165L	20 x 1.25 ml	2 x 12.5 ml	1000
PCR-165XL	100 ml	100 ml	4000

2 x concentrated PCR master mix containing aptamer inhibited hot start Taq polymerase, nucleotides (dATP, dCTP, dGTP, dTTP), KCl, $(NH_4)_2SO_4$, $MgCl_2$, red dye, density reagent, enhancing and stabilizing additives.

Recommended PCR assay:
Before starting, vortex the master mix thoroughly to assure homogeneity.

Ruby Hot Start Master (2x)

Red master mix for highly sensitive and specific PCR, direct gel loading
Ready-to-Use Mixes for PCR

component	stock. conc.	20 µl assay	50 µl assay	final conc.
Ruby Hot Start Master	2x	10 µl	25µl	1x
Primer Mix or each primer	10 µM each primer	0.4-0.8 µl	1-2 µl	200-400 nM each primer
Template/ sample DNA		< 10 ng	< 20 ng	
PCR-grade water		fill up to 20 µl	fill up to 50 µl	

Recommended cycling conditions:
Before cycling, vortex PCR tubes or plates to assure homogeneity and centrifuge briefly to remove bubbles.

Initial denaturation	95 °C	2 min	1x
Denaturation Annealing[1)] Elongation[2)]	95 °C 50 - 68 °C 72 °C	10 - 20 sec 10 - 20 sec 20 sec - 4 min	25 - 30x

[1)]The annealing temperature depends on the melting temperature of the primers used.
[2)]The elongation time depends on the length of the fragments to be amplified. A time of 1 min/kb is recommended.