



# ROX Internal Reference Dye (200µM)

reference fluorescence dye for real-time PCR

Product	Cat#	Package size
ROX Passive Reference Dye (200µM)	A351513	3 x 200µL

## Product description

ROX stands for 6-carboxyl-X-Rhodamine.

ROX is used as passive reference dye to compensate for non-PCR related well to well variations in the fluorescence. Variations in fluorescence can occur e.g., due to well to well variation in light intensity, which depends on the optical construction of the PCR machine or due to pipetting variations. The ROX fluorescence does not change during the course of the PCR reaction but provide a stable baseline to which samples are normalized. The excitation and emission of the reference dye are 584 nm and 612nm, respectively.

The ROX concentration to be used depends on the Real Time PCR instrument or, more precisely, on the filter available. On earlier Real Time PCR machines there was no filter matching precisely to the ROX fluorescence. Therefore, high ROX concentrations are needed with these machines. Some newer machines do not need any internal standard to correct for light intensity. Nevertheless, an internal standard might still be useful to correct for pipetting variations.

This dye has been qualified for use on instruments like the ABI PRISM® 7700, One-Step System, RotorGene and many others. Please consult the user manual of the real time PCR instrument with regard to appropriate levels of ROX. Ready to use qPCR Master Mixes with [High ROX \(500nM\)](#), [Low ROX \(50nM\)](#) or [without ROX](#) are also available from Genaxxon.

## Storage and Stability

The unopened product is stable for 2 years at -20° C and protected from light.

**Note:** Fluorescence level may vary from batch to batch.

## Composition

200µM ROX dye in 20mM Tris/HCl pH8.5, 0.1mM EDTA, 0.01% Tween® 20.

Each lot of ROX Passive Reference Dye is functionally tested in real-time PCR.

## Recommended ROX concentrations for different realtime PCR machines

Master mix	Final ROX concentration	PCR cycler brand	PCR Cycler
No ROX	0nM	BioRad:	iCycler iQ, iQ5 and MyiQ™, OpticonR, CFX 96, CFX 384
		Roche:	LightCycler® 480, LightCycler® 96, LightCycler® 2.0 iCycler iQ System
		Corbett:	Rotor-Gene™ 3000, 6000, Rotor-Gene Q
		Eppendorf	MasterCycler™ ep realplex
		Cepheid:	Smart Cycler®
Low ROX	40nM - 50nM	Applied Biosystems	ABi 7500 and ABi 7500 Fast, ABi ViiA7
		Stratagene	Mx3000™, Mx3005P™, and Mx4000™, Mx400R™
High ROX	400nM - 500nM	Applied Biosystems	ABi 7000 PRISM, 7300, 7700, 7900HT and 7900 HT Fast, StepOne™, StepOnePlus™

## Safety information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). These are available online as pdf-file or on request ([info@genaxxon.com](mailto:info@genaxxon.com)).



## Related real-time PCR products

Product	Cat#	Package size
GreenMasterMix (2X) No ROX	M3023.0100	200 x 25µL PCR reactions
GreenMasterMix (2X) No ROX	M3023.0500	1000 x 25µL PCR reactions
GreenMasterMix (2X) Low ROX	M3011.0100	200 x 25µL PCR reactions
GreenMasterMix (2X) Low ROX	M3011.0500	1000 x 25µL PCR reactions
GreenMasterMix (2X) High ROX	M3052.0100	200 x 25µL PCR reactions
GreenMasterMix (2X) High ROX	M3052.0500	1000 x 25µL PCR reactions
ProbeMasterMix (2X) No ROX	M3034.0100	200 x 25µL PCR reactions
ProbeMasterMix (2X) No ROX	M3045.0500	1000 x 25µL PCR reactions
GreenMasterMix (2X) Low ROX	M3031.0100	200 x 25µL PCR reactions
GreenMasterMix (2X) Low ROX	M3031.0500	1000 x 25µL PCR reactions
GreenMasterMix (2X) High ROX	M3010.0100	200 x 25µL PCR reactions
GreenMasterMix (2X) High ROX	M3010.0100	1000 x 25µL PCR reactions
SuperHotstart Taq Polymerase	M3307.0250	250 units
SuperHotstart Taq Polymerase	M3307.1000	1000 units
dNTP-Set 100mM	M3015.4100	4 x 1mL
dNTP-Set 100mM	M3015.4500	4 x 5mL