



FEATURES

■ **Environmentally safe**

Non-mutagenic, non-cytotoxic and safe to aquatic life for safe handling and easy disposal down the drain. Visit biotium.com for our Safety Report.

■ **Superior for qPCR and isothermal amplification**

Far brighter than SYBR® Green I for detecting amplification due to novel "release-on-demand" DNA-binding mechanism.

■ **Unrivaled DNA melt curve performance**

Low PCR inhibition permits the use of a saturating dye concentration for maximal signal and High Resolution Melt (HRM™) analysis.*

■ **Serves both as a qPCR dye and a DNA gel stain**

Electrophoretically separated PCR product can be visualized directly via a UV or blue light transilluminator without the need for another gel stain.

■ **Uses same settings as SYBR® Green I**

■ **Compatible with multiplex PCR**

Lack of dye migration from amplicon to amplicon enables detection of multiple PCR products by melt curves.

■ **Extremely stable**

Stable during storage and under PCR conditions.

■ **Many other applications**

EvaGreen® has been used in ddPCR, isothermal amplification, microfluidics systems, capillary gel electrophoresis, and other applications.



Unrivaled Real-time PCR Performance

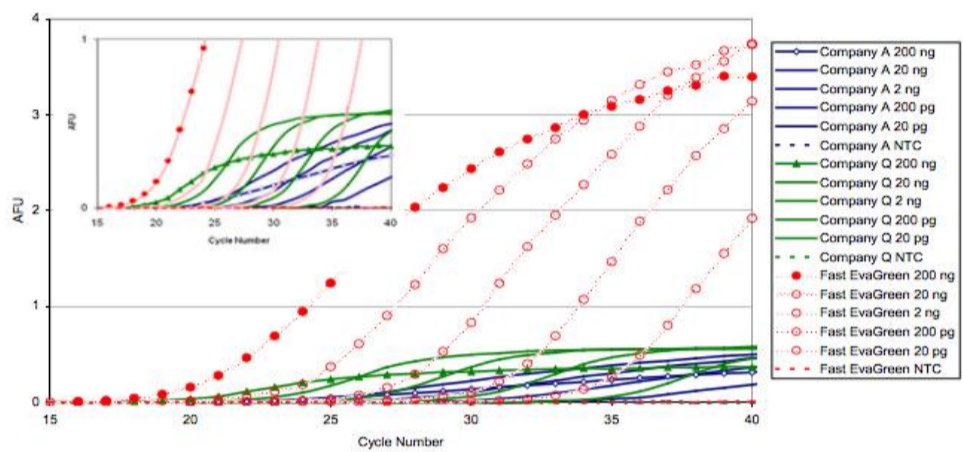


Figure 1. Comparison among Fast-Plus EvaGreen® qPCR Master Mix from Biotium and two fast SYBR® Green master mixes from two leading companies (company A and company Q) under similar condition. The inset is an enlarged view of the area near the baseline for better viewing the curve patterns of the weaker signals of the two SYBR-based master mixes. Amplicon: ATPG fragment of human genomic DNA; instrument: ABI 7900 Fast.

Novel Dye Binding Mechanism Translates into Better Signal and Sensitivity

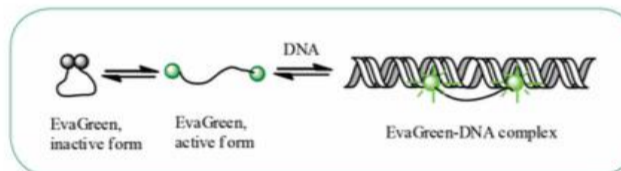


Figure 2. EvaGreen® dye binds to dsDNA via a "release-on-demand" mechanism. The equilibrium between bound and unbound dye molecules allows for a reserve of EvaGreen® to keep binding DNA as amplification occurs. EvaGreen® is also less inhibitory to PCR than other PCR dyes and can be used at a higher concentration for highly sensitive analysis applications such as HRM.*

Cell Membrane Impermeability Means a Safer Dye

SYBR® Green I	EvaGreen®	Incubation time (min)
		5 min
		30 min
		30 min, long exposure

Figure 3. Comparison of cell membrane permeability between EvaGreen® dye and SYBR® Green I. HeLa cells were incubated with SYBR® Green I (1.2 µM) or EvaGreen® dye (1.2 µM) at 37 °C. Images were taken following incubation for 5 and 30 minutes. SYBR® Green I entered cells rapidly while EvaGreen® dye appeared membrane-impermeable as evident from the absence of cell nuclear staining. Image taken with long photo-exposure time revealed that EvaGreen® dye only associated with cell membranes.

Related Products

Product Name	Cat #	Packaging Size
EvaGreen® dye, 20X in H ₂ O	31000	5 X 1 mL
Forget-Me-Not™ qPCR Master Mix	31041-T	100 rxn (1 X 1 mL)
Forget-Me-Not™ qPCR Master Mix with ROX	31042-T	100 rxn (1 X 1 mL)
Fast-Plus EvaGreen® qPCR Master Mix (no ROX)	31020	200 rxn (2 X 1 mL)
Fast-Plus EvaGreen® qPCR Master Mix with Low ROX	31014	200 rxn (2 X 1 mL)
Fast-Plus EvaGreen® qPCR Master Mix with High ROX	31015	200 rxn (2 X 1 mL)
Fast EvaGreen® qPCR Master Mix	31003	200 rxn (2 X 1 mL)