EvaGreen® Dye, 2000X in DMSO

A patented green fluorescent nucleic acid dye with features that are ideal for applications such as qPCR, HRM®, LAMP, and digital PCR. Highly concentrated for customers with specialized applications requiring a concentrated dye solution.

Product attributes

Detection method/readout	PCR/qPCR, HRM®
Excitation/Emission	500/530 nm (with DNA)
Concentration	2000X (2.5 mM)
Storage Conditions	Can be stored at 2 to 8°C or RT, Protect from light

Product Description

Highly concentrated EvaGreen® Dye, 2000X (2.5 mM) in DMSO is offered for customers with specialized applications requiring a concentrated dye solution. For most qPCR applications, we recommend our ready-to-use Forget-Me-Not™ EvaGreen® qPCR Master Mixes or EvaGreen® Dye, 20X in water. EvaGreen® Dye is a patented green fluorescent nucleic acid dye that is essentially non-fluorescent by itself, but becomes highly fluorescent upon binding to dsDNA.

- Brighter and less inhibitory than SYBR® Green
- Environmentally safe, non-mutagenic, and non-cytotoxic
- Unsurpassed thermal stability, chemical stability, and photostability
- Currently the only qPCR dye to be used in droplet digital PCR (ddPCR)
- Excellent compatibility with multiplex PCR
- Directly visualize amplification products in a gel

The Unique Properties of EvaGreen® Dye

EvaGreen® Dye was designed with a novel “release-on-demand” mechanism. In the absence of DNA, the dye assumes a conformation that is inactive. When DNA is available, the dye shifts to an active conformation that binds DNA to emit fluorescence. This property of the dye provides a unique mechanism to continuously supply the active form of the dye from an inactive reserve, as more DNA is produced during the PCR process. As a result, EvaGreen® Dye can be used at a much higher dye concentration than SYBR® Green I, resulting in a high resolution signal for digital PCR, real-time qPCR, HRM®, and multiplex qPCR by DNA melt curve analysis. This technology also makes it possible to significantly shorten the chain extension time, enabling the use of fast PCR protocols. Learn more about EvaGreen® Dye Technology.

EvaGreen® Dye Applications

When bound to dsDNA, EvaGreen® Dye has excitation and emission spectra very close to those of fluorescein (FAM) or SYBR® Green I, making it readily compatible with instruments equipped with the 488 nm argon laser or any visible light excitation with wavelength in the region. In addition to qPCR and HRM, EvaGreen® Dye is currently the only qPCR dye to be used in droplet digital PCR (ddPCR). EvaGreen® can also be used for isothermal amplification, microfluidic PCR systems, capillary gel electrophoresis, and more. EvaGreen® amplification products can be directly detected on a gel without the need for another DNA gel stain. Download a list of Selected EvaGreen® References for more information.

A Safer, More Stable PCR Dye

EvaGreen® Dye is environmentally friendly, non-mutagenic, and non-cytotoxic because it is impermeable to cell membranes, unlike SYBR® Green I, which enters cell rapidly and is known to be a powerful mutation-enhancer. Download the EvaGreen® Dye Safety Report for more information. EvaGreen® Dye is more convenient to handle because it has no detectable dye decomposition in PCR buffer at 95-100°C for 48 hours; is highly stable under either alkaline or acidic condition; and withstands repeated freeze-thaw cycles.

Discover New & Improved EvaGreen® Plus

EvaGreen® Plus Dye is an improved alternative that offers enhanced signal-to-noise over Biotium’s original EvaGreen® Dye. These performance benefits offer advantages for a variety of DNA detection applications, including qPCR, digital PCR, and LAMP.

References

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EvaGreen® Dye in droplet digital PCR:
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Find a list of EvaGreen® references under Supporting Documents.