

dsGold Nucleic Acid Gel Staining Solution, 10,000×

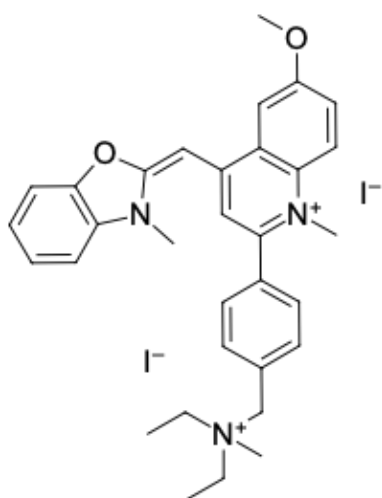
<http://www.lumiprobe.com/p/dsgold-gel-stain>

dsGold, also known as Oxazole Gold, is an asymmetrical cyanine dye used to stain dsDNA, ssDNA, and RNA in electrophoretic gels.

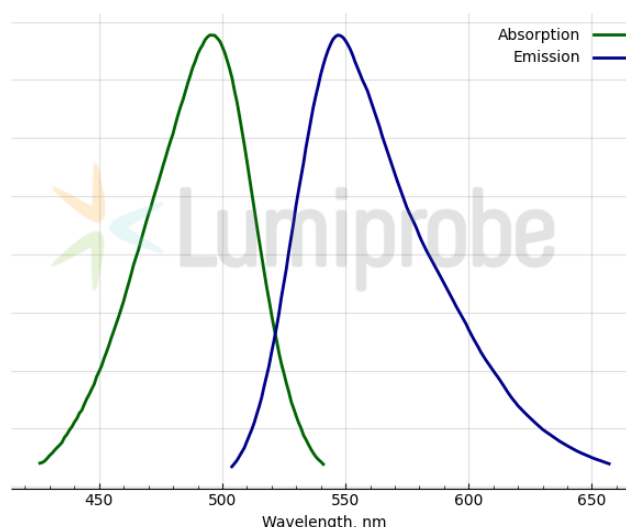
dsGold exhibits more than 1000-fold fluorescence enhancement upon binding to nucleic acids and has the highest quantum yield (0.6-0.7) of the dye-nucleic acid complexes compared to other stains such as ethidium bromide (EtBr), [dsGreen](#), and [ssGreen](#). The dye-nucleic acid complexes have two fluorescence excitation maxima, at ~300 nm and ~495 nm, and a single emission maximum at ~546 nm. Thus, dsGold-stained gels can be visualized using UV and blue light transilluminators with appropriate filters.

dsGold allows the detection of as little as 25 pg of DNA in denaturing urea, glyoxal, and formaldehyde gels. The stain is able to penetrate thick and high-percentage agarose gels rapidly. Due to the low fluorescence of the unbound dye, formaldehyde agarose gels do not require the destaining procedure. The presence of dsGold in stained gels at standard working concentrations does not interfere with T4 DNA ligase, Taq polymerase, restriction endonucleases, or Northern or Southern blotting. The dye can be easily removed from nucleic acids by ethanol precipitation, leaving pure templates available for subsequent manipulation or analysis.

We offer dsGold as a 10,000× concentrate in DMSO. To stain the gel, dilute the concentrate into TE, TBE, or TAE buffer and incubate the gel in 1× staining solution for 10–40 min.



Structure of dsGold



Absorption and emission spectra of dsGold (dsDNA-dye complex)

General properties

Appearance:	dark orange solution
Molecular weight:	749.47
Molecular formula:	C ₃₂ H ₃₇ I ₂ N ₃ O ₂
IUPAC name:	[2-(4-[[diethyl(methyl)ammonio]methyl]phenyl)-6-methoxy-1-methyl-4-[[[(2Z)-3-methyl-1,3-benzoxazol-2-ylidene]methyl]quinolin-1-ium]
Quality control:	UV-Vis abs
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

Spectral properties

Excitation/absorption 495 maximum, nm:	
Emission maximum, nm:	546 (dsDNA complex)