SIGMA-ALDRICH®
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Product Information

91000 Atto 647N azide

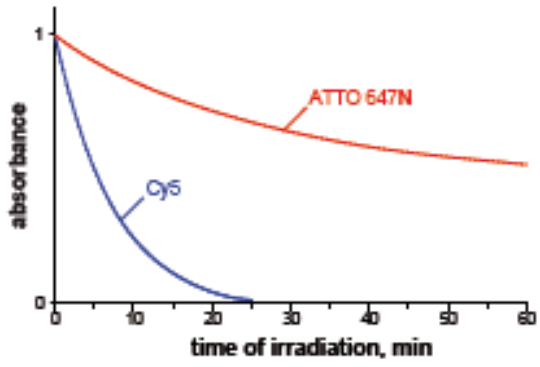
Application

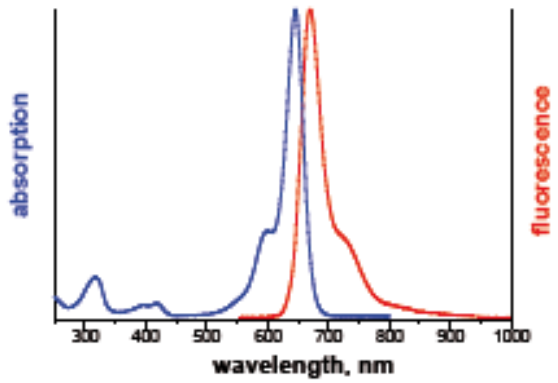
Atto 647N belongs to a new generation of fluorescent labels for the red spectral region. The dye is designed for application in the area of life science, e.g. labeling of DNA, RNA or proteins. Characteristic features of the label are strong absorption, excellent fluorescence quantum yield, high photostability, excellent ozone resistance, good solubility, and very little triplet formation. Atto 647N is a cationic dye. After coupling to a substrate the dye carries a net electrical charge of +1.
In common with most Atto-labels, absorption and fluorescence are independent of pH in the range of 2 to 11, used in typical applications. As supplied Atto 647N consists of a mixture of two isomers with practically identical absorption and fluorescence properties.
The azide modification is suitable for reactions with alkyne groups (Huisgen reaction –"Click Chemistry")

Product Description

MW	843 g/mol
λ_{abs}	644 nm
ε_{max}	1.5 x 10^5 M^{-1} cm^{-1}
λ_{fl}	669 nm
η_{fl}	65 %
τ_{fl}	3.5 ns
CF_{260}	0.06
CF_{280}	0.05

Optical data of the carboxy derivative (in water)





Storage: Store at –20°C and protected from light.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.