

65906 Phalloidin -Atto 647N

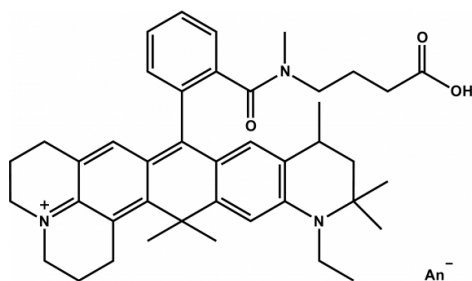
Application

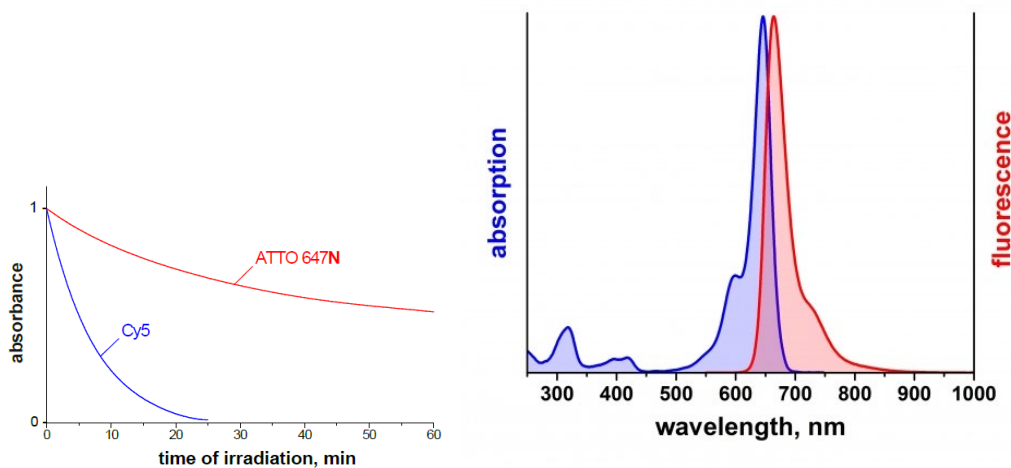
Atto 647N belongs to a new generation of fluorescent labels for the red spectral region. The dye is designed for application in the area of life science, e.g. labeling of DNA, RNA or proteins. Characteristic features of the label are strong absorption, excellent fluorescence quantum yield, high photostability, 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.

Phalloidin is a fungal toxin isolated from the poisonous mushroom *Amanita phalloides*. Its toxicity is attributed to the ability to bind F actin in liver and muscle cells. As a result of binding phalloidin, actin filaments become strongly stabilized. Phalloidin has been found to bind only to polymeric and oligomeric forms of actin, and not to monomeric actin. The dissociation constant of the actin-phalloidin complex has been determined to be on the order of 3×10^{-8} . Phalloidin differs from amanitin in rapidity of action; at high dose levels, death of mice or rats occurs within 1 or 2 hours. Fluorescent conjugates of phalloidin are used to label actin filaments for histological applications. Some structural features of phalloidin are required for the binding to actin. However, the side chain of amino acid 7 (g-d-dihydroxyleucine) is accessible for chemical modifications without appreciable loss of affinity for actin.

Product Description

MW	1530 g/mol
λ_{abs}	646 nm
ϵ_{max}	$1.5 \times 10^5 \text{ M}^{-1} \text{ cm}^{-1}$
λ_{fl}	664 nm
η_{fl}	65 %
τ_{fl}	3.5 ns
CF ₂₆₀	0.04
CF ₂₈₀	0.03



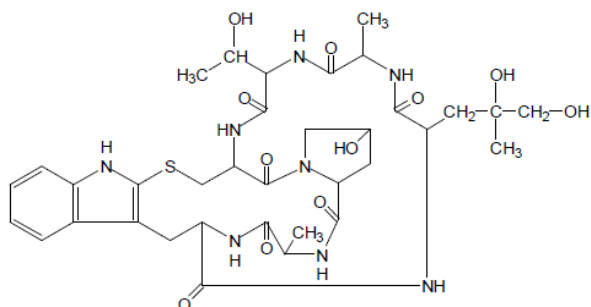


Properties of Phalloidin:

Molecular formula: C₃₅H₄₈N₈O₁₁S

Molecular weight: 788.9 (anhydrous)

Extinction Coefficient: $E_{1\%}^{1\text{cm}} = 0.597$ (295 nm in water)



Staining procedure:

To prepare a stock solution of the phalloidin-conjugate it is recommended dissolving the sample in 1 ml of methanol].

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.

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