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Product Information

89045 Atto 514 Streptavidin

Application

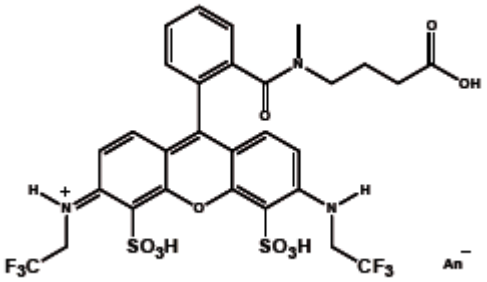
Atto 514 is a new hydrophilic fluorescent label with excellent water solubility. The dye exhibits strong absorption, high fluorescence quantum yield and exceptional thermal and photo-stability. Thus Atto 514 is highly suitable for single-molecule detection applications and high-resolution microscopy such as PALM, dSTORM, STED etc. Additionally the dye highly qualifies to be applied in flow cytometry (FACS), fluorescence in-situ hybridization (FISH) and many more. The fluorescence is excited most efficiently in the range 510 - 535 nm. A suitable source of excitation is the 514 nm line of the Argon-Ion laser.

Streptavidin, isolated from *Streptomyces avidinii*, is a tetrameric protein of 4 x 13.2 kDa which binds very tightly to the small molecule biotin. The dissociation constant of the complex is extremely small ($K_d \approx 10^{-15}$ M), ranking among the strongest non-covalent interactions. This has made the streptavidin/biotin system a useful tool in numerous biochemical applications.

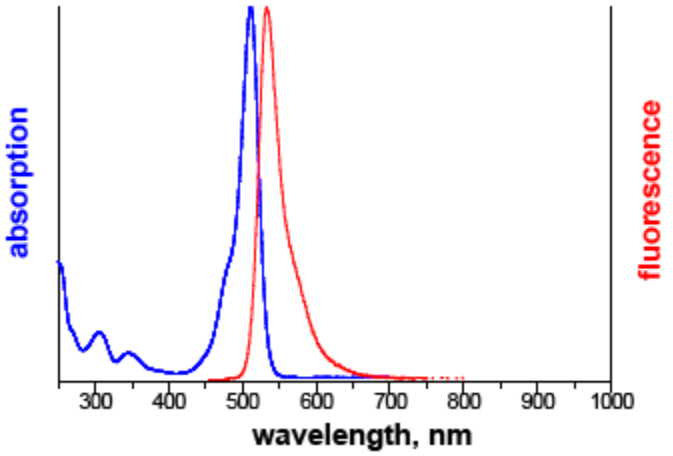
Atto streptavidin conjugates may be used as secondary detection reagents in flow cytometry, immunoassays, blot analysis, histochemical applications, etc. The dye conjugates are supplied as solvent-free lyophilized solids. Atto streptavidin conjugates are readily soluble in water.

Product Description

λ_{abs}	511 nm
ε_{max}	1.15×10^5 M^{-1} cm^{-1}
λ_{fl}	533 nm
η_{fl}	85%
τ_{fl}	3.9 ns
CF_{260}	0.21
CF_{280}	0.08



Optical data of the carboxy derivative (in water)



Storage and handling

Atto-Dyes labeled streptavidines are supplied as lyophilisates and should be stored at ≤ –20°C, desiccated and protected from light. When stored as indicated, the product is stable for at least three years.
For the preparation of stock solutions allow vial to equilibrate to room temperature before opening. Dissolve the ATTO-streptavidin conjugate in distilled water to a concentration of 1 mg/ml. For long-term storage of such solutions one should add sodium azide to a concentration of 5 mM. Protected from light and stored at 2 - 6 °C, solutions are stable for up to six months. For longer storage you may divide the solution into aliquots and freeze at -20 °C. However, one should avoid repeated freezing-and-thawing cycles.

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.