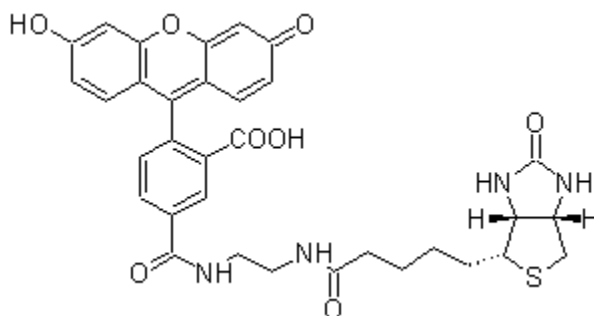


Biotin-4-Fluorescein

Ordering Information	Storage Conditions
Product Number: 3006 (5 mg)	Keep at -20 °C and desiccated. Expiration date is 12 months from the date of receipt.

Chemical and Physical Properties



Molecular Weight: 644.69

Appearance: orange powder

Solvent: dimethylsulfoxide (DMSO)

Spectral Properties: Excitation = 492 nm; Fluorescence = 518 nm.

Biological Applications

This bifunctional biotin conjugate demonstrates better binding and stronger fluorescence than biotin fluorescein. It has similar avidin-binding properties in terms of high affinity, fast association, and non-cooperative binding to avidin and streptavidin tetramers. These exceptional properties are attributed to the small size/length of the new ligand since all larger/longer biotin derivatives are known for their mutual steric hindrance and anti-cooperative binding in 4:1 complexes with avidin and streptavidin tetramers. Specific binding of this biotin-fluorescein conjugate towards avidin and streptavidin is accompanied by 84-88% quenching of ligand fluorescence. It is used for the quantitation of biotin-binding sites. Both the fluorescence and absorbance of biotin-4-fluorescein are quenched upon binding to one of the four biotin-binding sites of streptavidin, or avidin conjugates of fluorescent dyes, or enzymes. As a result, the number of biotin-binding sites can be estimated when a known concentration of biotin-4-fluorescein is added to a known amount of streptavidin.

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