



Europa Bioproducts Ltd

15-17 North Street • Wicken
Ely • Cambridgeshire • CB7 5XW
Tel: 0044 (0)1353-721118
Fax: 0044 (0)1353-624589

Biotin-(AC₅)₂-OSu

Item# Unit Size
B306-10 10 mg

Chemical Name: 6-[6-(Biotinylamino)hexanoylamino]hexanoic acid N-hydroxysuccinimide ester

CAS: 89889-52-1

Appearance: White or slightly yellow powder

Purity: ≥90.0% (HPLC)

MW: 567.70, C₂₆H₄₁N₅O₇S

Storage Condition: -20°C

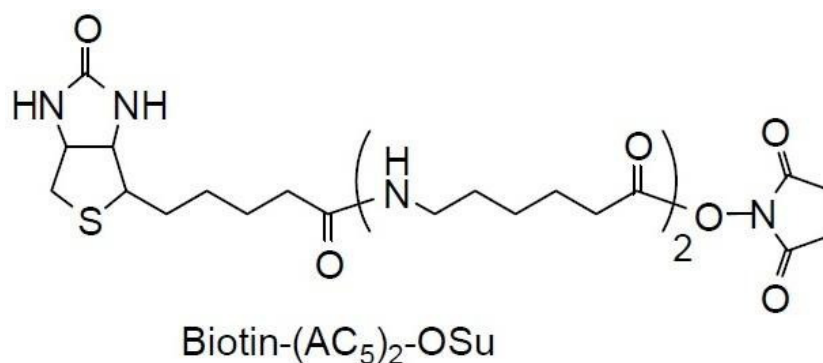
Shipping Condition: ambient temperature

Product Description of Amine-Reactive Biotins

The avidin-biotin system has many applications in immunology and histochemistry. The interaction between avidin and biotin is remarkably strong with a dissociation constant on the order of 10⁻¹⁵ M. Biotin is usually added to primary or secondary antibodies such as anti-IgG and anti-IgM. After preparing the antigen-antibody complex with the biotin-labeled antibody, colorimetric, or fluorometric detection of the antigen is performed using enzyme or fluorescein-labeled avidin or streptavidin. Succinimidyl ester biotins react with primary and secondary amines, such as amino acids and proteins, at pH 7-9. Succinimidyl ester reacts with free amine groups to create a stable amide bond.

Succinimidyl biotin reagents must be dissolved in DMSO, DMF, or alcohol. Stock solutions prepared with DMSO are stable for several months at -20°C. Sulfo succinimidyl biotin reagents are soluble in water, so there is no need to use organic solvents such as DMF or DMSO. IgG prepared using biotin with a longer spacer such as Biotin-(AC₅)₂-OSu or Biotin-(AC₅)₂-Sulfo-OSu, has a better signal-to-noise ratio. The longer spacer enables streptavidin or anti-biotin IgG to recognize biotin without structural inhibition. Therefore, Biotin-(AC₅)₂-OSu is utilized as the biotin labeling agent in the Biotin Labeling Kit-NH₂.

Reaction Scheme



Labeling Procedure for Protein

1. Prepare 50 mmol/l of biotin labeling reagent using DMSO (ex. 5.7 mg/200 ul for 50 mmol solution) *Once biotin labeling reagent is solved in water, please mix it to sample protein immediately.
2. Prepare protein solution using Bicine buffer(pH8.5, 10 mmol/l).

E.mail: info@europa-bioproducts.com

Web site: <http://www.europa-bioproducts.com>

Registered Office: 15-17 North Street, Wicken, Ely, Cambridgeshire CB7 5XW

Registered Number: 2703381



CERTIFICATE NO. 3222



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3. Add the prepared solution of biotin labeling reagent to protein solution and mix them.
Please mix protein and biotin as the molar ratio of 1:2 - 1:10 (protein : biotin).
4. Incubate the mixed solution at 25°C for 2-4 hour.
5. Remove excess biotin labeling reagent using gel filtration or dialysis



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