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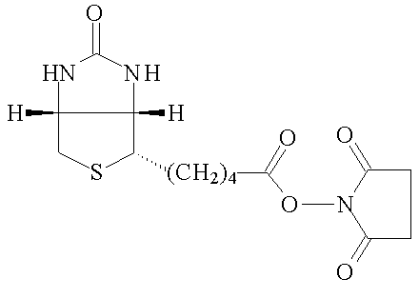
Product Information

(+)-Biotin N-hydroxysuccinimide ester

Catalog Number **H1759**
Storage Temperature –20 °C

CAS RN 35013-72-0
Synonyms: N-Hydroxysuccinidobiotin, NHS-D-Biotin, BNHS, Biotinyl-N-Hydroxysuccinimide Ester, N-Succinimide-D-Biotinate

Product Description



Molecular formula: $C_{14}H_{19}N_3O_5S$
Molecular weight: 341.38

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.

Preparation Instructions

NHS-D-Biotin is soluble in dimethylformamide (DMF) at ≤50 mg/mL, yielding a clear solution, clear to faint yellow in color. A solution in dry DMF remains active for at least one month. It is also soluble in dimethyl sulfoxide (DMSO) at least to 30 mg/mL.

Storage/Stability

Store the product at –20 °C. When stored properly, the product remains active for 4 years. It remains active several weeks at room temperature if kept anhydrous.

Procedure

Biotinylation of Antibodies

1. Dialyze immunoglobulin solution (affinity purified antibody or IgG fraction of antiserum) against several changes of carbonate buffer [0.1 M sodium carbonate buffer ($NaHCO_3/Na_2CO_3$) pH 9.5 containing 0.1% NaN_3] at 2–8 °C. After dialysis, adjust protein concentration to 20 mg/mL. Determine the total amount of antibody and total volume of the immunoglobulin solution.

2. Dissolve NHS-D-Biotin (Catalog Number H1759) in DMSO immediately prior to use (protecting solution from light) at a concentration of 22 mg/mL. Using a volume equal to 10% of the total volume of the immunoglobulin solution, add the NHS-D-Biotin solution in portions to the immunoglobulin solution with gentle stirring, and incubate at room temperature for 4 hours.
   Note: DMF can be used to prepare NHS-D-Biotin solution.

3. Dialyze the reaction solution against several changes of PBS buffer (0.01 M sodium phosphate, 0.15 M sodium chloride, pH 7.4, containing 0.1% NaN_3) at 2–8 °C. If a precipitate forms, remove by filtration, and then continue dialysis.

4. After dialysis, store the biotinylated antibody at –20 °C.

References

1. Bayer, E.A., and Wilchek, M., Methods of Biochemical Analysis, **26**, 28 (1979).

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