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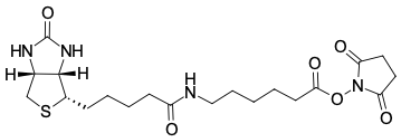
# Biotin-X-NHS ester

http://www.lumiprobe.com/p/biotin-x-nhs-ester

Biotin may be conjugated to many proteins while maintaining the biological activity. The biotinylated probe is usually detected by avidin, streptavidin due to their effective binding which is used in various applications such as affinity chromatography, ELISA and Western Blot, fluorescence-activated cell sorting (FACS), intracellular labeling.

Biotin-X-NHS ester is a derivative with C6-spacer to reduce steric effect when binding amino acids, peptides, or proteins by reacting with primary amines. This compound is used to attach biotin to primary amines under alkaline conditions (pH 8-9).



**Structure of Biotin-X-NHS ester**

## General properties

| | |
|---|---|
| Appearance: | white solid |
| Mass spec M+ increment: | 339.2 |
| Molecular weight: | 454.55 |
| CAS number: | 72040-63-2 |
| Molecular formula: | $C_{20}H_{30}N_4O_6S$ |
| IUPAC name: | (2,5-dioxopyrrolidin-1-yl) 6-[5-[(3aS,4S,6aR)-2-oxo-1,3,3a,4,6,6a-hexahydrothieno[3,4-d]imidazol-4-yl]pentanoylamino]hexanoate |
| Solubility: | good in DMSO, moderately soluble in DMF |
| Quality control: | NMR $^1H$ |
| Storage conditions: | 12 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. |
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