

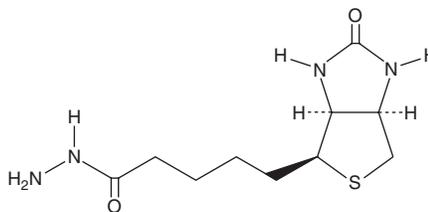
# PRODUCT INFORMATION



## Biotin hydrazide

Item No. 18418

**CAS Registry No.:** 66640-86-6  
**Formal Name:** (3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazole-4-pentanoic acid hydrazide  
**MF:** C<sub>10</sub>H<sub>18</sub>N<sub>4</sub>O<sub>2</sub>S  
**FW:** 258.3  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

A stock solution may be made by dissolving the biotin hydrazide in the solvent of choice. Biotin hydrazide is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 5 mg/ml.

Biotin hydrazide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, biotin hydrazide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Biotin hydrazide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Biotin hydrazide is a biotinyl derivative used to label surface functional groups, antibodies, lectins, sugars, nucleic acids, or molecules with free carboxylic or keto groups.<sup>1</sup> Biotin hydrazide is used as a probe for determining protein carbonylation, an irreversible posttranslational modification resulting from the actions of reactive oxygen species or lipid oxidation products.<sup>2</sup> The reaction of this probe is direct and does not require catalysts or reducing agents.

### References

1. Diamandis, E.P. and Christopoulos, T.K. The biotin-(strept)avidin system: Principles and applications in biotechnology. *Clin. Chem.* **37(5)**, 625-636 (1991).
2. Madian, A.G. and Regnier, F.E. Proteomic identification of carbonylated proteins and their oxidation sites. *J. Proteome Res.* **9(8)**, 3766-3780 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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