

# PRODUCT INFORMATION

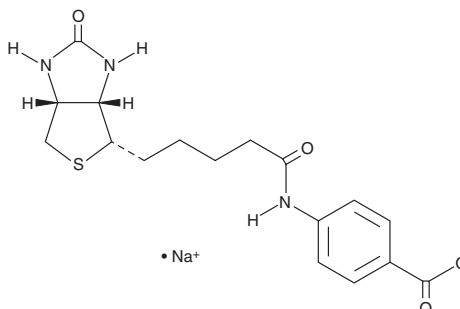


## (+)-Biotin 4-Amidobenzoic Acid (sodium salt)

Item No. 20534

**CAS Registry No.:** 102418-74-6  
**Formal Name:** 4-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-benzoic acid, monosodium salt  
**Synonyms:** (+)-Biotin PABA,  
N-Biotinyl-4-aminobenzoic Acid

**MF:** C<sub>17</sub>H<sub>20</sub>N<sub>3</sub>O<sub>4</sub>S • Na  
**FW:** 385.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 262 nm  
**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

(+)-Biotin 4-amidobenzoic acid (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-biotin 4-amidobenzoic acid (sodium salt) in the solvent of choice, which should be purged with an inert gas. (+)-Biotin 4-amidobenzoic acid (sodium salt) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (+)-biotin 4-amidobenzoic acid (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (+)-biotin 4-amidobenzoic acid (sodium salt) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

(+)-Biotin 4-amidobenzoic acid is a biotinidase substrate.<sup>1</sup> Upon enzymatic hydrolysis, 4-aminobenzoic acid (PABA; Item No. 18659) is released which can be quantified by colorimetric detection at 540 nm in the presence of N-1-naphthylethylenediamine as a measure of biotinidase activity. (+)-Biotin 4-amidobenzoic acid has been used in the evaluation of biotinidase deficiency, an inborn error of metabolism characterized by ketolactic acidosis, hyperammonemia, and neurological dysfunction.<sup>2</sup>

### References

1. Kobza, K.A., Chaiseeda, K., Sarath, G., *et al.* Biotinyl-methyl 4-(amidomethyl)benzoate is a competitive inhibitor of human biotinidase. *J. Nutr. Biochem.* **19**(12), 826-832 (2008).
2. Szabó, E., Szatmári, I., Szőnyi, L., *et al.* Quantitative analytical method for the determination of biotinidase activity in dried blood spot samples. *Anal. Chem.* **87**(20), 10573-10578 (2015).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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