

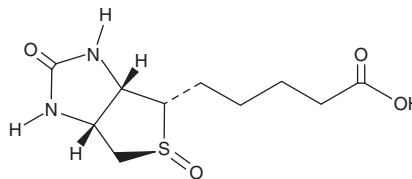
PRODUCT INFORMATION



Biotin (S)-sulfoxide

Item No. 34145

CAS Registry No.: 10406-89-0
Formal Name: 5-((3aS,4S,5S,6aR)-5-oxido-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanoic acid
Synonyms: Biotin (+)-sulfoxide, Biotin d-sulfoxide
MF: C₁₀H₁₆N₂O₄S
FW: 260.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

Biotin (S)-sulfoxide is supplied as a solid. A stock solution may be made by dissolving the biotin (S)-sulfoxide in the solvent of choice, which should be purged with an inert gas. Biotin (S)-sulfoxide is slightly soluble in acetonitrile and DMSO.

Description

Biotin (S)-sulfoxide is an inactive metabolite of the coenzyme biotin (Item No. 22582).^{1,2} It has also been found in *E. coli* and is reduced by the biotin sulfoxide reduction system as a source of biotin.³

References

1. Denkel, L.A., Rhen, M., and Bange, F.-C. Biotin sulfoxide reductase contributes to oxidative stress tolerance and virulence in *Salmonella enterica* serovar Typhimurium. *Microbiology (Reading)* **159**(Pt 7), 1447-1458 (2013).
2. Carling, R.S. and Turner, C. Chapter 10 - Methods for assessment of biotin (Vitamin B₇). *Laboratory Assessment of Vitamin Status*. Harrington, D., 1st edition, *Academic Press* (2019).
3. del Campillo-Campbell, A., Dykhuizen, D., and Clearly, P.P. Enzymic reduction of d-biotin d-sulfoxide to d-biotin. *Methods Enzymol.* **62**, 379-385 (1979).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/14/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM