

PRODUCT INFORMATION



Riboflavin-d₇ Item No. 43147

Formal Name: 7,8-bis(methyl-d₃)-10-((2S,3S,4R)-2,3,4,5-tetrahydroxypentyl)benzo[g]pteridine-2,4(3H,10H)-dione-9-d

Synonyms: Lactochrome-d₇, Vitamin B₂-d₇

MF: C₁₇H₁₃D₇N₄O₆

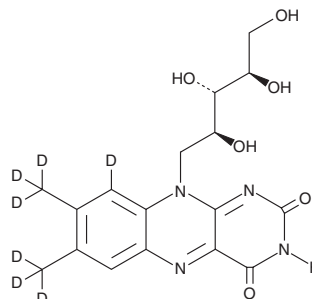
FW: 383.4

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀

Supplied as: A 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

Riboflavin-d₇ is intended for use as an internal standard for the quantification of riboflavin by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

Riboflavin is an essential B vitamin.¹ It is a biosynthetic precursor to riboflavin 5'-monophosphate (Item No. 18167) and flavin adenine dinucleotide (FAD; Item No. 23386), which are necessary coenzymes in oxidation-reduction reactions involved in diverse biological processes, including electron transport and lipid and drug metabolism.¹⁻³ Formulations containing riboflavin have been used as dietary supplements.

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. Section 25.5 NAD⁺, FAD, and coenzyme A are formed from ATP. *Biochemistry* 5th Edition, (2002).
2. Walsh, C.T., and Wenciewicz, T.A. Flavoenzymes: Versatile catalysts in biosynthetic pathways. *Nat. Prod. Rep.* 30(1), 175-200 (2013).
3. Pinto, J.T. and Zemleni, J. Riboflavin. *Adv. Nutr.* 7(5), 973-975 (2016).

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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