

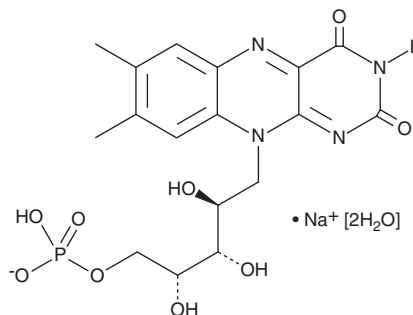
# PRODUCT INFORMATION



## Riboflavin 5'-monophosphate (sodium salt hydrate)

Item No. 18167

**CAS Registry No.:** 6184-17-4  
**Formal Name:** riboflavin 5'-(dihydrogen phosphate), monosodium salt, dihydrate  
**Synonyms:** Flavin mononucleotide, FMN, Vitamin B<sub>2</sub> phosphate  
**MF:** C<sub>17</sub>H<sub>20</sub>N<sub>4</sub>O<sub>9</sub>P • Na [2H<sub>2</sub>O]  
**FW:** 514.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 223, 267, 373, 446 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

Riboflavin 5'-monophosphate (FMN) (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of FMN (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of FMN (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

FMN is a coenzyme that is tightly bound to enzymes catalyzing oxidation and reduction reactions in a variety of biosynthetic pathways.<sup>1,2</sup> FMN also binds the FMN riboswitch (RFN element) on RNA to alter gene regulation.<sup>3,4</sup> FMN is a substrate of FMN phosphohydrolases and is used to study their function.<sup>5</sup>

### References

1. Walsh, C.T. and Wencewicz, T.A. Flavoenzymes: Versatile catalysts in biosynthetic pathways. *Nat. Prod. Rep.* **30(1)**, 175-200 (2013).
2. Feng, C., Chen, L., Li, W., et al. Dissecting regulation mechanism of the FMN to heme interdomain electron transfer in nitric oxide synthases. *J. Inorg. Biochem.* **130**, 130-140 (2014).
3. Serganov, A., Huang, L., and Patel, D.J. Coenzyme recognition and gene regulation by a flavin mononucleotide riboswitch. *Nature* **458(7235)**, 233-237 (2009).
4. Takemoto, N., Tanaka, Y., and Inui, M. Rho and RNase play a central role in FMN riboswitch regulation in *Corynebacterium glutamicum*. *Nucleic Acids Res.* **43(1)**, 520-529 (2015).
5. Barile, M., Brizio, C., De Virgilio, C., et al. Flavin adenine dinucleotide and flavin mononucleotide metabolism in rat liver—the occurrence of FAD pyrophosphatase and FMN phosphohydrolase in isolated mitochondria. *Eur. J. Biochem.* **249(3)**, 777-785 (1997).

#### 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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