

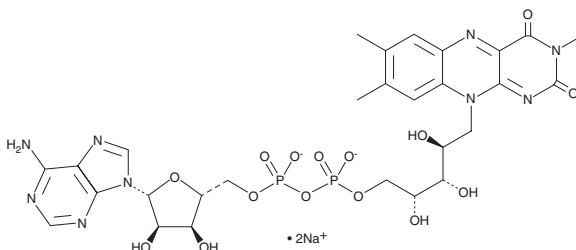
PRODUCT INFORMATION



FAD (sodium salt)

Item No. 23386

CAS Registry No.: 84366-81-4
Formal Name: riboflavin 5'-(trihydrogen diphosphate), P'→5'-ester with adenosine, disodium salt
Synonym: Flavin adenine dinucleotide
MF: C₂₇H₃₁N₉O₁₅P₂ • 2Na
FW: 829.5
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 265, 376, 449 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

FAD (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the FAD (sodium salt) in the solvent of choice, which should be purged with an inert gas. FAD (sodium salt) is soluble in the organic solvent DMSO at a concentration of approximately 0.1 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 FAD (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of FAD (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

FAD is a flavin dinucleotide that is synthesized when the AMP moiety from ATP is transferred onto riboflavin 5'-monophosphate (Item No. 18167).¹ FAD functions as a coenzyme that facilitates the transfer of electrons by flavoenzymes in oxidation-reduction reactions in cells.² FAD (0.0125-0.05% solution) reduces UV-B-induced death of human corneal epithelial cells *in vitro*.³

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. Section 25.5 NAD⁺, FAD, and coenzyme A are formed from ATP. *In Biochemistry*, 5th ed. (2002).
2. Batey, D.W. and Eckhert, C.D. Analysis of flavins in ocular tissues of the rabbit. *Invest. Ophthalmol. Vis. Sci.* **32(7)**, 1981-1985 (1991).
3. Sakamoto, A. and Masatsugu, N. Inhibitor for corneal epithelial cell death, inhibitor characterized by combining hyaluronic acid and flavin adenine dinucleotide **US 14/347,291** (2012).

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, 11/18/2022

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