Flavin adenine dinucleotide disodium salt

Cat. No.: HY-B1654A

CAS No.: 84366-81-4

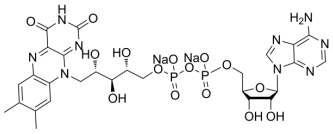
Molecular Formula: $C_{27}H_{31}N_9Na_2O_{15}P_2$

Molecular Weight: 829.51

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 33.33 mg/mL (40.18 mM; Need ultrasonic)
DMSO : 5 mg/mL (6.03 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.2055 mL	6.0277 mL	12.0553 mL
	5 mM	0.2411 mL	1.2055 mL	2.4111 mL
	10 mM	0.1206 mL	0.6028 mL	1.2055 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Flavin adenine dinucleotide (FAD) disodium salt is a redox cofactor, more specifically a prosthetic group of a protein, involved in several important enzymatic reactions in metabolism.

IC_{50} & Target

Microbial Metabolite | Human Endogenous Metabolite

In Vitro

Poly(Flavin adenine dinucleotide, FAD) characterized by an additional polymer-type redox reaction is a highly effective electrocatalyst for NADH oxidation: operating at the lowest potentials reported for NADH transducers (0.00 V, pH 7.4), poly(FAD) is characterized by the electrochemical rate constant of $1.8 \pm 0.6 \times 10^{-3}$ cm/s, which is at the level of the NADH mass-transfer constant. Poly(FAD)-modified electrodes are characterized by the dramatically improved stability and, is the most advantageous NADH transducers for analytical chemistry[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

With Flavin adenine dinucleotide (2 mg/kg), the chlorpromazine (CPZ)-induced decrease in ventricular fibrillation threshold (VFT) is significantly cancelled. Flavin adenine dinucleotide cancels the effect of CPZ on canine heart mitochondria. After injection of Flavin adenine dinucleotide, the dogs show a transient hypotension within 10 min, then their blood pressures

recover to the initial level. Flavin adenine dinucleotide also prevents mitochondrial dysfunction induced by chlorpromazine [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sugiyama S, et al. Protection of chlorpromazine-induced arrhythmia by flavin-adenine-dinucleotide in canine heart. Jpn Heart J. 1979 Sep;20(5):657-65.

[2]. Karyakin AA, et al. Electropolymerized flavin adenine dinucleotide as an advanced NADH transducer. Anal Chem. 2004 Apr 1;76(7):2004-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA