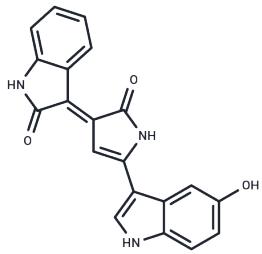
Data Sheet (Cat.No.T35751)

TargetMol

Violacein

Chemical Properties



CAS No. :	548-54-9
Formula:	C20H13N3O3
Molecular Weight:	343.34
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Violacein is a bacterial metabolite originally isolated from C. violaceum that has antibacterial and antiprotozoal activities.[1] [2] It is produced by C. violaceum as a purple pigment in response to N-hexanoyl homoserine lactone , a property that has been modified to create a strain of C. violaceum used in detecting quorum-sensing molecules.[3] Violacein is active against Gram-positive bacteria, including B. subtilis and S. aureus (MICs = 0.8 and 1.6 μM, respectively). It is also active against P. falciparum, including chloroquine-susceptible and -resistant strains (IC50s = 0.85 and 0.63 μM, respectively).[2] It reduces parasitemia in a mouse model of nonlethal P. chabaudi chabaudi infection when administered at a dose of 7.5 mg/kg and increases survival in a mouse model of lethal P. chabaudi chabaudi infection. Violacein permeabilizes the cytoplasmic membrane of bacterial cells but does not affect the cell wall.[1]
Targets(IC50)	Apoptosis,Others,Endogenous Metabolite

Solubility Information

Solubility	DMSO: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9126 mL	14.5628 mL	29.1256 mL
5 mM	0.5825 mL	2.9126 mL	5.8251 mL
10 mM	0.2913 mL	1.4563 mL	2.9126 mL
50 mM	0.0583 mL	0.2913 mL	0.5825 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cauz, A.C.G., Carretero, G.P.B., Saraiva, G.K.V., et al. Violacein targets the cytoplasmic membrane of bacteria. ACS Infect. Dis. 5(4), 539-549 (2019).
Lopes, S.C.P., Blanco, Y.C., Justo, G.Z., et al. Violacein extracted from Chromobacterium violaceum inhibits Plasmodium growth in vitro and in vivo. Antimicrob. Agents Chemother. 53(5), 2149-2152 (2009).
Blosser, R.S., and Gray, K.M. Extraction of violacein from Chromobacterium violaceum provides a new quantitative bioassay for N-acyl homoserine lactone autoinducers. J. Microbiol. Methods 40(1), 47-55 (2000).