PRODUCT INFORMATION



Violacein

Item No. 27959

CAS Registry No.:	548-54-9	H
Formal Name:	(3E)-3-[1,2-dihydro-5-(5-hydroxy-1H-	N
	indol-3-yl)-2-oxo-3H-pyrrol-3-ylidene]-	
	1,3-dihydro-2H-indol-2-one	
MF:	C ₂₀ H ₁₃ N ₃ O ₃	
FW:	343.3	
Purity:	≥85%	HO
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	N° //
Item Origin:	Bacterium/Chromobacterium violaceum	Н

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Violacein is supplied as a solid. A stock solution may be made by dissolving the violacein in the solvent of choice, which should be purged with an inert gas. Violacein is soluble in DMSO.

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 (Item No. 10007896), 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 μ M, respectively). It is also active against P. falciparum, including chloroquine-susceptible and -resistant strains (IC₅₀s = 0.85 and 0.63 μ M, 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

References

- 1. 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).
- 2. 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).
- 3. 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).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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