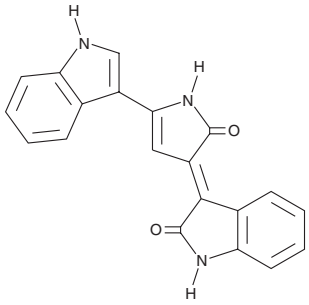
PRODUCT INFORMATION

Deoxyviolacein

Item No. 23477



CAS Registry No.:	5839-61-2
Formal Name:	(3E)-3-[1,2-dihydro-5-(1H-indol-3-yl)-2-oxo-3H-pyrrol-3-ylidene]-1,3-dihydro-2H-indol-2-one
MF:	$C_{20}H_{13}N_3O_2$
FW:	327.3
Purity:	≥95%
Supplied as:	A 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

Deoxyviolacein is supplied as a solid. A stock solution may be made by dissolving the deoxyviolacein in the solvent of choice. Deoxyviolacein is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide, which should be purged with an inert gas.

Deoxyviolacein is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Deoxyviolacein is a bacterial metabolite and byproduct in the biosynthesis of the bisindole alkaloid violacein (Item No. 27959) that has anticancer, antibacterial, and antifungal properties.[1,2] It inhibits proliferation of hepatocellular carcinoma cells when used at concentrations ranging from 0.1 to 1 µM.[2] Deoxyviolacein (125 µg/ml) has antibacterial activity against Gram-positive bacteria, including *S. aureus*, *B. subtilis*, and *B. megaterium*.[1] It also has antifungal activity against *R. solani* when used at a concentration of 2 mg/ml.

References

1. Wang, H., Wang, F., Zhu, X., *et al.* Biosynthesis and characterization of violacein, deoxyviolacein and oxyviolacein in heterologous host, and their antimicrobial activities. *Biochem. Eng. J.* **67**, 148-155 (2012).
2. Jiang, P.-X., Wang, H.-S., Xiao, S., *et al.* Pathway redesign for deoxyviolacein biosynthesis in *Citrobacter freundii* and characterization of this pigment. *Appl. Microbiol. Biotechnol.* **94(6)**, 1521-1532 (2012).

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