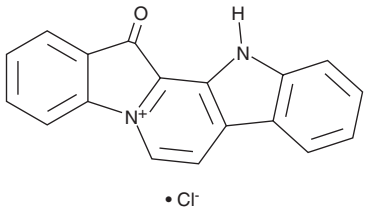
PRODUCT INFORMATION

Fascaplysin (chloride)

Item No. 21715

CAS Registry No.:	114719-57-2
Formal Name:	12,13-dihydro-13-oxo-pyrido[1,2-a:3,4-b']diindol-5-ium, monochloride
Synonym:	NSC 622398
MF:	$C_{18}H_{11}N_2O$ • Cl
FW:	306.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 215, 262, 299, 407 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

Fascaplysin (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the fascaplysin (chloride) in the solvent of choice, which should be purged with an inert gas. Fascaplysin (chloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of fascaplysin (chloride) in these solvents is approximately 16 and 0.14 mg/ml, respectively.

Fascaplysin (chloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fascaplysin (chloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fascaplysin (chloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fascaplysin is an inhibitor of cyclin D kinase 4/ cyclin D1 (IC_{50} = 0.35 µM) that was originally isolated from the marine sponge *Thorectandra*.[1] It is significantly less selective for Cdk6/cyclin D1 (IC_{50} = 3.4 µM) and does not inhibit other Cdks and tyrosine kinases.[1] Fascaplysin is reported to have antiproliferative activity against retinoblastoma-positive tumor cells, blocking retinoblastoma phosphorylation and inducing G_1 arrest.[1] Inhibition of Cdk4 *via* fascaplysin has been shown to induce peroxisome-proliferator-activated receptor γ-1α deacetylation (IC_{50} = 0.7 µM) and has been used to demonstrate a role for insulin-activated cyclinD1-Cdk4 signaling in the control of glucose metabolism.[2]

References

1. Soni, R., Muller, L., Furet, P., *et al.* Inhibition of cyclin-dependent kinase 4 (Cdk4) by fascaplysin, a marine natural product. *Biochem. Biophys. Res. Commun.* **275(3)**, 877-884 (2000).
2. Lee, Y., Dominy, J.E., Choi, Y.J., *et al.* Cyclin D1-Cdk4 controls glucose metabolism independently of cell cycle progression. *Nature* **510(7506)**, 547-551 (2014).

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