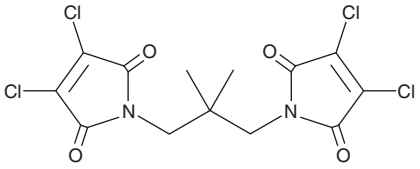
PRODUCT INFORMATION

NSC 617145

Item No. 21973

CAS Registry No.:	203115-63-3
Formal Name:	1,1'-(2,2-dimethyl-1,3-propanediyl)*bis*[3,4-dichloro-1H-pyrrole-2,5-dione
MF:	$C_{13}H_{10}Cl_4N_2O_4$
FW:	400.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 240 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

NSC 617145 is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 617145 in the solvent of choice, which should be purged with an inert gas. NSC 617145 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of NSC 617145 in these solvents is approximately 1 and 2 mg/ml, respectively.

NSC 617145 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NSC 617145 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NSC 617145 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NSC 617145 is an inhibitor of WRN helicase (IC_{50} = 230 nM) that inhibits the ATPase, but not exonuclease, activity of WRN helicase in a concentration-dependent manner.[1] It is selective for WRN over BLM, FANCJ, ChlR1, RecQ, and UvrD helicases, only exhibiting 7% inhibition of RECQ1 at a concentration of 5 µM. NSC 617145 inhibits growth of HeLa cells *via* formation of DNA double strand breaks (DSBs) and induction of apoptosis in a WRN helicase-dependent manner. NSC 617145 also acts synergistically with mitomycin C (Item No. 11435) to inhibit growth as well as induce DSBs and chromosomal abnormalities in Fanconia-anemia deficient (FA-D2$^{-/-}$) cells.

Reference

1. Aggarwal, M., Banerjee, T., Sommers, J.A., *et al.* Werner syndrome helicase has a critical role in DNA damage responses in the absence of a functional fanconi anemia pathway. *Cancer Res.* **73(17)**, 5497-5507 (2013).

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