

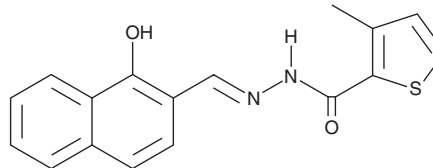
PRODUCT INFORMATION



PCNA-I1

Item No. 20454

CAS Registry No.: 444930-42-1
Formal Name: 3-methyl-2-[(1-hydroxy-2-naphthalenyl)methylene]hydrazide-2-thiophenecarboxylic acid
MF: C₁₇H₁₄N₂O₂S
FW: 310.4
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 289, 319, 333, 363 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

PCNA-I1 is supplied as a crystalline solid. A stock solution may be made by dissolving the PCNA-I1 in the solvent of choice, which should be purged with an inert gas. PCNA-I1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PCNA-I1 in these solvents is approximately 10 mg/ml.

PCNA-I1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PCNA-I1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PCNA-I1 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PCNA-I1 is an inhibitor of proliferating cell nuclear antigen (PCNA) that binds to PCNA trimers ($K_d = 0.41 \mu\text{M}$) and dose-dependently reduces the level of PCNA associated with chromatin in PC3 cells.¹ It preferentially inhibits growth of a variety of human and mouse cancer cell lines ($\text{IC}_{50}\text{s} = 0.05\text{-}0.3 \mu\text{M}$) over non-transformed cells ($\text{IC}_{50}\text{s} = 0.99\text{-}2 \mu\text{M}$). PCNA-I1 leads to an accumulation of cells in the G₁ phase during the first 24 hours of incubation and halts the cell cycle in the S and G₂/M phases by 72 hours following treatment. It also reduces tumor growth in an LNCaP prostate cancer mouse xenograft model when administered at a dose of 10 mg/kg, five days per week, for two weeks.²

References

1. Tan, Z., Wortman, M., Dillehay, K.L., *et al.* Small-molecule targeting of proliferating cell nuclear antigen chromatin association inhibits tumor cell growth. *Mol. Pharmacol.* **81**(6), (2012).
2. Dillehay, K.L., Lu, S., and Dong, Z. Antitumor effects of a novel small molecule targeting PCNA chromatin association in prostate cancer. *Mol. Cancer Ther.* **13**(12), 2817-2826 (2014).

WARNING

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

SAFETY 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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