

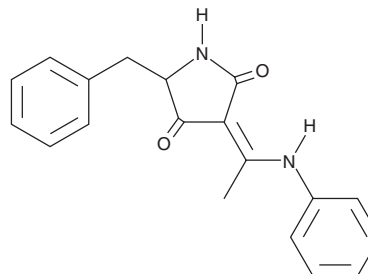
PRODUCT INFORMATION



TN-16

Item No. 21222

CAS Registry No.: 33016-12-5
Formal Name: 3-[1-(phenylamino)ethylidene]-5-(phenylmethyl)-2,4-pyrrolidinedione
Synonym: NSC 239274
MF: C₁₉H₁₈N₂O₂
FW: 306.4
Purity: ≥98%
UV/Vis.: λ_{max}: 234, 319 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

TN-16 is supplied as a crystalline solid. A stock solution may be made by dissolving the TN-16 in the solvent of choice, which should be purged with an inert gas. TN-16 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TN-16 in these solvents is approximately 0.25, 20, and 12.5 mg/ml, respectively.

TN-16 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TN-16 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TN-16 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

TN-16 is an inhibitor of microtubule polymerization (IC₅₀ = 0.4-1.7 μM).¹ It blocks taxol-induced assembly of tubulin (IC₅₀ = 6 μM) and blocks colchicine (Item No. 9000760) binding to tubulin.¹ Like colchicine, TN-16 inhibits alkylation of tubulin.² TN-16 induces metaphase arrest in renal cell carcinoma cells.³ TN-16 can be used in combination with other inhibitors to enhance the efficiency of human artificial chromosome transfer to recipient cells.⁴

References

1. Arai, T. Inhibition of microtubule assembly *in vitro* by TN-16, a synthetic antitumor drug. *FEBS Lett.* **155**(2), 273-276 (1983).
2. Roach, M.C. and Luduena, R.F. The effect of TN-16 on the alkylation of tubulin. *Biochem. Biophys. Res. Commun.* **129**(1), 200-205 (1985).
3. Nakamura, M., Kanda, S., Kawamura, M., *et al.* Effects of low concentration of vinblastine on the anchorage-independent growth and *in vitro* invasion of human renal carcinoma cell lines. *Cancer Lett.* **69**(2), 85-91 (1993).
4. Liskovych, M., Lee, N.C.O., Larinov, V., *et al.* Moving toward a higher efficiency of microcell-mediated chromosome transfer. *Mol. Ther. Methods Clin. Dev.* **3**, 16043 (2016).

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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