

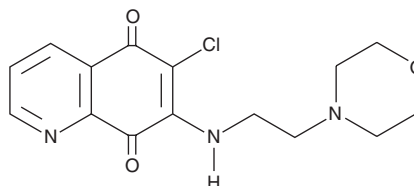
PRODUCT INFORMATION



NSC 663284

Item No. 13303

CAS Registry No.: 383907-43-5
Formal Name: 6-chloro-7-[[2-(4-morpholinyl)ethyl]amino]-5,8-quinolinedione
Synonyms: Cdc25 Phosphatase Inhibitor II, DA-3003-1, SPS8I1
MF: C₁₅H₁₆ClN₃O₃
FW: 321.8
Purity: ≥98%
UV/Vis.: λ_{max}: 236, 274, 477 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NSC 663284 is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 663284 in the solvent of choice, which should be purged with an inert gas. NSC 663284 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of NSC 663284 in these solvents is approximately 0.5, 10, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NSC 663284 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NSC 663284 in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Three genes encode dual specificity phosphatases that are Cdc25 homologs. The phosphatases, Cdc25A through C, are proto-oncogenes and are often over-expressed in cancers. NSC 663284 is a potent, cell-permeable, and irreversible inhibitor of all Cdc25 isoforms, with preference for Cdc25A (IC₅₀ = 29, 95, and 89 nM for Cdc25A, Cdc25B2, and Cdc25C, respectively).¹ NSC 663284 poorly inhibits other phosphatases, including Vaccinia virus VH1-related (IC₅₀ = 4.0 μM), PTP1B (no inhibition), and the mitogen-activated protein kinase phosphatases (MKP) MKP-1 or -3 (no inhibition).^{1,2} By inhibiting Cdc25 isoforms, NSC 663284 prevents the dephosphorylation and activation of Cdk1 and Cdk2, arrests cells at both G₁ and G₂/M phases, and prevents the proliferation of several human tumor cell lines.^{1,3-5}

References

1. Lazo, J.S., Aslan, D.C., Southwick, E.C., et al. *J. Med. Chem.* **44**(24), 4042-4049 (2001).
2. Vogt, A., McDonald, P.R., Tamewitz, A., et al. *Mol. Cancer Ther.* **7**(2), 330-340 (2008).
3. Pu, L., Amoscato, A.A., Bier, M.E., et al. *J. Biol. Chem.* **277**(49), 46877-46885 (2002).
4. Han, Y., Shen, H., Carr, B.I., et al. *J. Pharmacol. Exp. Ther.* **309**(1), 64-70 (2004).
5. Guo, J., Parise, R.A., Joseph, E., et al. *Anticancer Res.* **27**(5A), 3067-3074 (2007).

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.

WARRANTY AND LIMITATION OF REMEDY

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