

Product Name: NU 7026

Catalog No.: 2828

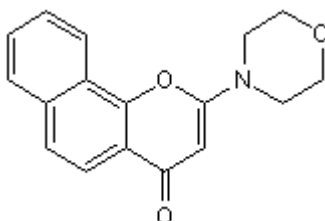
Batch No.: 3

CAS Number: 154447-35-5

IUPAC Name: 2-(4-Morpholinyl)-4*H*-naphthol[1,2-*b*]pyran-4-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₅NO₃·½H₂O
Batch Molecular Weight: 290.32
Physical Appearance: Cream solid
Solubility: DMSO to 10 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.2 (Dichloromethane:Methanol [96:4])
HPLC: Shows 99.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.33	5.55	4.82
Found	70.38	5.35	4.95

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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 USA & CANADA Tel: (800) 343-7475 EUROPE Tel: +44 (0)1235 529449 CHINA Tel: +86 (21) 52380373
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Description:

ATP-competitive inhibitor of DNA-dependent protein kinase (DNA-PK). Displays selectivity over other PIKK family enzymes (IC₅₀ values are 0.23, 13.0, > 100 and > 100 µM for DNA-PK, PI3K, ATM and ATR respectively). Radiosensitizes both proliferating and quiescent mouse embryonic fibroblast cells to IR and inhibits DSB repair.

Physical and Chemical Properties:

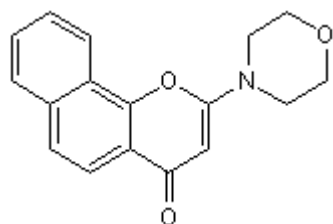
Batch Molecular Formula: C₁₇H₁₅NO₃ · ½H₂O

Batch Molecular Weight: 290.32

Physical Appearance: Cream solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Veuger *et al* (2003) Radiosensitization and DNA repair inhibition by the combined use of novel inhibitors of DNA-dependent protein kinase and poly(ADP-ribose) polymerase-I. *Cancer Res.* **63** 6008. PMID: 14522929.

Hollick *et al* (2003) 2,6-disubstituted pyran-4-one and thiopyran-4-one inhibitors of DNA-dependent protein kinase (DNA-PK). *Bioorg.Med.Chem.Letts.* **13** 3083.

Amrein *et al* (2007) Chlorambucil cytotoxicity in malignant B lymphocytes is synergistically increased by 2-(morpholin-4-yl)-benzo[h]chomen-4-one (NU7026)-mediated inhibition of DNA double-strand break repair via inhibition of DNA-dependent protein kinase. *J.Pharmacol.Exp.Ther.* **321** 848. PMID: 17351105.

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