

**Product Name:** Nimbolide

**Catalog No.:** 7289

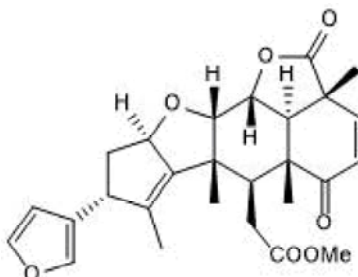
**Batch No.:** 1

CAS Number: 25990-37-8

IUPAC Name: (2a*R*,5a*R*,6*S*,6a*R*,8*R*,9a*R*,10a*S*,10b*R*,10c*R*)-8-(3-Furanyl)-2a,5a,6,6a,8,9,9a,10a,10b,10c-decahydro-2a,5a,6a,7-tetramethyl-2,5-dioxo-2*H*,5*H*-cyclopenta[*d'*]naphtho[1,8-*bc*:2,3-*b'*]difuran-6-acetic acid methyl ester

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>27</sub> H <sub>30</sub> O <sub>7</sub> ·1/4H <sub>2</sub> O
<b>Batch Molecular Weight:</b>	471.03
<b>Physical Appearance:</b>	Pale yellow solid
<b>Solubility:</b>	DMSO to 100 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 96.5% purity		
<b><sup>1</sup>H NMR:</b>	Consistent with structure		
<b>Mass Spectrum:</b>	Consistent with structure		
<b>Microanalysis:</b>	Carbon Hydrogen Nitrogen		
	Theoretical	68.85	6.53
	Found	69.06	6.47

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

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**Description:**

Nimbolide inhibits auto-ubiquitination of the E3 ligase RNF114 and p21 ubiquitination in vitro. This compound impairs proliferation of triple-negative breast cancer cell lines. Nimbolide also induces apoptotic cell death in a Waldenströms macroglobulinemia cell line (BCWM1) and inhibits tumor growth in a xenograft model of Waldenströms macroglobulinemia. Nimbolide can be used for the development of Degraders that utilize RNF114 as an E3 ligase for Targeted Protein Degradation.

**Physical and Chemical Properties:**

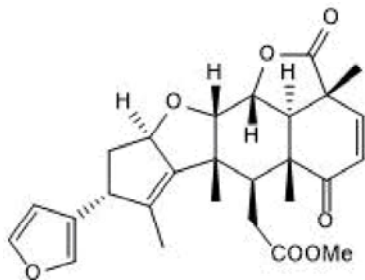
Batch Molecular Formula: C<sub>27</sub>H<sub>30</sub>O<sub>7</sub>·½H<sub>2</sub>O

Batch Molecular Weight: 471.03

Physical Appearance: Pale yellow solid

**Minimum Purity:** ≥97%

**Batch Molecular Structure:**



**References:**

**Tong *et al*** (2020) A nimbolide-based kinase degrader preferentially degrades oncogenic BCR-ABL. *ACS Chem.Biol.* **15** 1788. PMID: 32568522.

**Spradin *et al*** (2019) Harnessing the anti-cancer natural product nimbolide for targeted protein degradation. *Nat.Chem.Biol.* **15** 747. PMID: 31209351.

**Chitta *et al*** (2014) Nimbolide targets BCL2 and induces apoptosis in preclinical models of Waldenströms macroglobulinemia. *Blood Cancer J.* **4** 260. PMID: 25382610.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 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.

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