

Product Name: Cambinol

Catalog No.: 7137

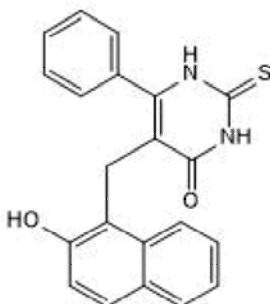
Batch No.: 1

CAS Number: 14513-15-6

IUPAC Name: 2,3-Dihydro-5-[(2-hydroxy-1-naphthalenyl)methyl]-6-phenyl-2-thioxo-4(1H)-pyrimidinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₁H₁₆N₂O₂S.
Batch Molecular Weight: 360.43
Physical Appearance: Off White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	69.98	4.47	7.77
Found	69.69	4.46	7.74

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

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Description:

Cambinol is a neutral sphingomyelinase-2 (nSMase2) inhibitor ($K_i = 7 \mu\text{M}$; $\text{IC}_{50} \sim 7.7 \mu\text{M}$). In vitro, Cambinol suppresses extracellular vesicle production and inhibits cell-to-cell tau propagation in tau biosensor cells. In vivo, Cambinol decreases tumor necrosis factor- α or interleukin-1 β -induced increases of ceramide and cell death in primary neurons. Cambinol is neuroprotective and brain penetrant. Cambinol inhibits the activity of human SIRT1 and SIRT2 and exerts antitumor activity in vitro and in mouse xenograft studies.

Physical and Chemical Properties:

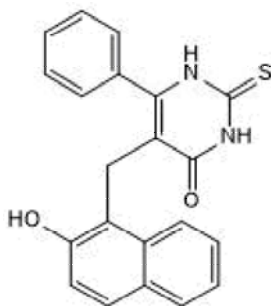
Batch Molecular Formula: $\text{C}_{21}\text{H}_{16}\text{N}_2\text{O}_2\text{S}$.

Batch Molecular Weight: 360.43

Physical Appearance: Off White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at -20°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 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 $45\text{-}60^\circ\text{C}$ 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:

Sackmann et al (2019) Inhibition of nSMase2 Reduces the transfer of oligomeric α -synuclein irrespective of hypoxia. *Front.Mol.Neurosci.* **12** 200. PMID: 31555088.

Stepanek et al (2019) Neutral sphingomyelinase 2 inhibitors based on the 4-(1H-imidazol-2-yl)-2,6-dialkoxyphenol scaffold. *Eur.J.Med.Chem.* **170** 276. PMID: 30921693.

Bilousova (2018) Suppression of tau propagation using an inhibitor that targets the DK-switch of nSMase2. *Biochem.Biophys.Res.Commun.* **499** 751. PMID: 29604274.

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