

Certificate of Analysis

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Product Name: Nutlin 3a	Catalog No.: 6075	Batch No.: 2
CAS Number: 675576-98-4		
IUPAC Name: 4-[[[(4 <i>S</i> ,5 <i>R</i>)-4,5- <i>bis</i> (4-Chlorophenyl)-4,5-dihydro-2-[4-methoxy-2-(1-methylethoxy)phenyl]-1 <i>H</i> -imidazol-1-yl]carbonyl]-2-piperazinone		

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₀H₃₀Cl₂N₄O₄

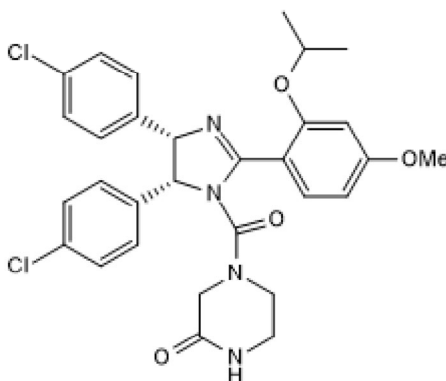
Batch Molecular Weight: 581.49

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

Chiral HPLC: Shows 99.2% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -123.8 (Concentration = 0.13, Solvent = Chloroform)

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	61.97	5.2	9.64
Found	61.09	5.07	9.49

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

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Description:

Nutlin 3a is an MDM2 antagonist (IC_{50} = 90 nM); inhibits the MDM2-p53 interaction. Active enantiomer of Nutlin-3 (Cat. No. 3984). Induces expression for P53 regulated genes. Suppresses tumor growth in vivo >98% in prostate cancer and osteosarcoma cancer models. Antiproliferative.

Physical and Chemical Properties:

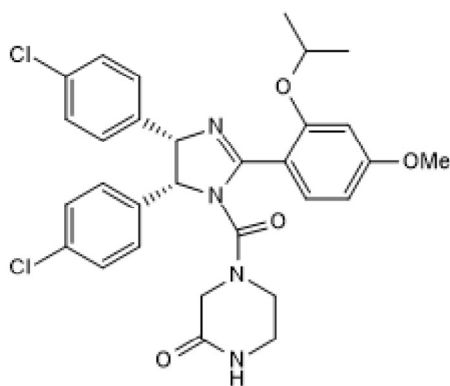
Batch Molecular Formula: $C_{30}H_{30}Cl_2N_4O_4$

Batch Molecular Weight: 581.49

Physical Appearance: White solid

Minimum Purity: ≥97%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Tovar *et al* (2006) Small-molecule MDM2 antagonists reveal aberrant p53 signaling in cancer: implications for therapy. *Proc.Natl.Acad.Sci.USA*. **103** 1888. PMID: 16443686.

Vassilev *et al* (2004) *In vivo* activation of the p53 pathway by small-molecule antagonists of MDM2. *Science* **303** 844. PMID: 14704432.

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