

Certificate of Analysis

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Product Name: EX 527

Catalog No.: 2780

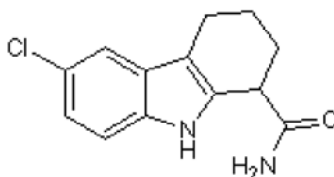
Batch No.: 3

CAS Number: 49843-98-3

IUPAC Name: 6-Chloro-2,3,4,9-tetrahydro-1*H*-carbazole-1-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃H₁₃ClN₂O
Batch Molecular Weight: 248.71
Physical Appearance: Off-white solid
Solubility: DMSO to 75 mM
ethanol to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.78	5.27	11.26
Found	62.7	5.27	11.18

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

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Description:

EX 527 is a selective inhibitor of SIRT1 that does not inhibit histone deacetylase (HDAC) or other sirtuin deacetylase family members (IC₅₀ values are 98, 19600, 48700, > 100000 and > 100000 nM for SIRT1, SIRT2, SIRT3, HDAC and NADase respectively). In an animal model of Huntington's disease, EX 527 rescues neuronal degeneration, extends lifespan, reduces huntingtin inclusions and prevents ventricular enlargement. EX 527 enhances p53 acetylation in response to DNA damaging agents. Orally bioavailable and brain penetrant.

Physical and Chemical Properties:

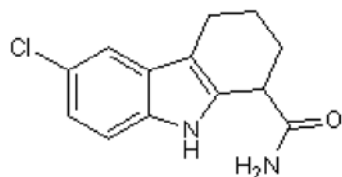
Batch Molecular Formula: C₁₃H₁₃ClN₂O

Batch Molecular Weight: 248.71

Physical Appearance: Off-white 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 75 mM

ethanol to 50 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Smith *et al* (2014) A potent and selective Sirtuin 1 inhibitor alleviates pathology in multiple animal and cell models of Huntington's disease. *Hum. Mol. Genet.* **23** 2995. PMID: 24436303.

Zhao *et al* (2013) The 2.5 Å crystal structure of the SIRT1 catalytic domain bound to nicotinamide adenine dinucleotide (NAD⁺) and an indole (EX527 analogue) reveals a novel mechanism of histone deacetylase inhibition. *J. Med. Chem.* **56** 963. PMID: 23311358.

Solomon *et al* (2006) Inhibition of SIRT1 catalytic activity increases p53 acetylation but does not alter cell survival following DNA damage. *Mol. Cell. Biol.* **26** 28. PMID: 16354677.

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