

Certificate of Analysis

Product Name: AK 7

Catalog No.: 4754

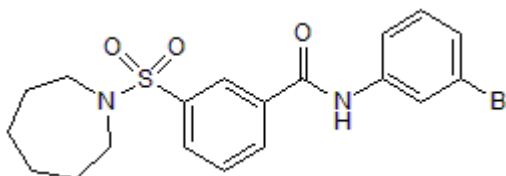
Batch No.: 1

CAS Number: 420831-40-9

IUPAC Name: *N*-(3-Bromophenyl)-3-[(hexahydro-1*H*-azepin-1-yl)sulfonyl]benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₉ H ₂₁ BrN ₂ O ₃ S
Batch Molecular Weight:	437.35
Physical Appearance:	Off-white solid
Solubility:	DMSO to 100 mM ethanol to 10 mM with gentle warming
Storage:	Store at +4°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 98.4% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Microanalysis:	

	Carbon	Hydrogen	Nitrogen
Theoretical	52.18	4.84	6.41
Found	51.86	4.8	6.42

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

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Description:

Selective SIRT2 inhibitor (IC₅₀ = 15.5 μM); displays no effect on SIRT1 or SIRT3. Decreases neuronal cholesterol levels; improves motor function and ameliorates brain atrophy in a mouse model of Huntington's disease. Brain penetrant.

Physical and Chemical Properties:

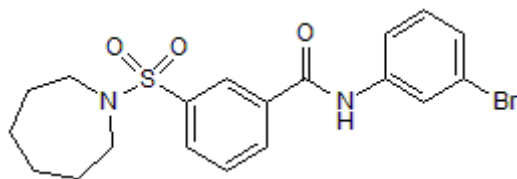
Batch Molecular Formula: C₁₉H₂₁BrN₂O₃S

Batch Molecular Weight: 437.35

Physical Appearance: Off-white solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Taylor et al (2011) A brain-permeable small molecule reduces neuronal cholesterol by inhibiting activity of sirtuin 2 deacetylase. *ACS Chem. Biol.* **6** 540. PMID: 21370928.

Chopra et al (2012) The sirtuin inhibitor AK-7 is neuroprotective in Huntington's disease mouse models. *Cell Rep.* **2** 1492. PMID: 23200855.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 mM with gentle warming

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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