

Product Name: DBZ

Catalog No.: 4489

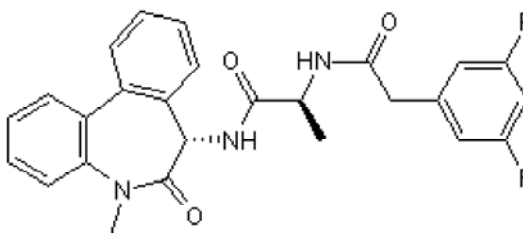
Batch No.: 5

CAS Number: 209984-56-5

IUPAC Name: *N*-[(1*S*)-2-[[[(7*S*)-6,7-Dihydro-5-methyl-6-oxo-5*H*-dibenz[*b,d*]azepin-7-yl]amino]-1-methyl-2-oxoethyl]-3,5-difluorobenzeneacetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₆H₂₃F₂N₃O₃
Batch Molecular Weight: 463.48
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
Chiral HPLC: Shows 100.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = -152.4 (Concentration = 1, Solvent = Methanol)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.38	5	9.07
Found	67.63	5.1	9.06

Diastereomer Purity (de): 100%

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

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Description:

DBZ is an inhibitor of γ -secretase aspartyl protease. DBZ blocks amyloid precursor protein-like (APPL) and Notch cleavage (IC₅₀ values are 2.6 nM and 1.7-2.9 nM, respectively). By inhibiting Notch and the Notch pathway, DBZ improves efficiency of iPSC generation and production of iPSCs from mouse and human keratinocytes without KLF4 and CMYC. In an animal model of Alzheimer's disease, DBZ inhibits the cleavage of amyloid precursor protein into A β 40. DBZ promotes cochlear supporting cell proliferation and hair cell mitotic regeneration in neonatal mice. DBZ in combination with iDOT1L enables maintenance of human naive-state plur... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

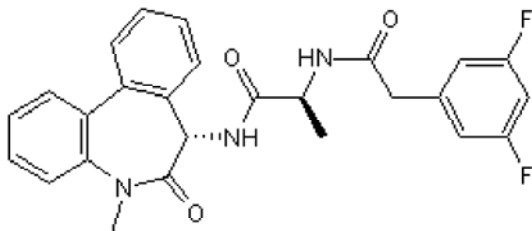
Batch Molecular Formula: C₂₆H₂₃F₂N₃O₃

Batch Molecular Weight: 463.48

Physical Appearance: White solid

Minimum Purity: \geq 98%

Batch Molecular Structure:



References:

Isono et al (2020) The combination of dibenzazepine and a DOT1L inhibitor enables a stable maintenance of human naive-state pluripotency in non-hypoxic conditions. *Regen. Ther.* **15** 161. PMID: 33426214.

Wu et al (2020) Dibenzazepine promotes cochlear supporting cell proliferation and hair cell regeneration in neonatal mice. *Cell Prolif.* **53** e12872. PMID: 32677724.

Ichida et al (2014) Notch inhibition allows oncogene-independent generation of iPS cells. *Nat.Chem.Biol.* **10** 632. PMID: 24952596.

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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