

Product Name: SRT 1720

Catalog No.: 7558

Batch No.: 1

CAS Number: 925434-55-5

IUPAC Name: *N*-[2-[3-(1-Piperazinylmethyl)imidazo[2,1-*b*]thiazol-6-yl]phenyl]-2-quinoxalinecarboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅H₂₃N₇OS.2¼H₂O

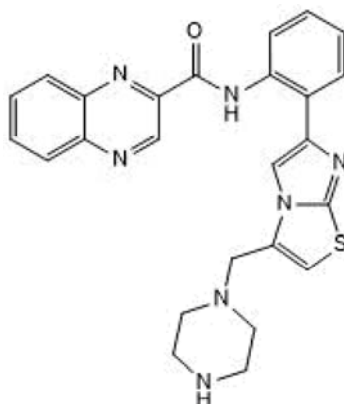
Batch Molecular Weight: 510.09

Physical Appearance: Yellow solid

Solubility: DMSO to 5 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	58.87	5.43	19.22
Found	58.56	5.17	18.95

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Description:

SRT 1720 is selective SIRT 1 activator ($EC_{50} = 0.16 \mu\text{M}$). SRT 1720 inhibits growth of bladder cancer organoids and xenografts ($IC_{50} = 0.35 \mu\text{M}$) and induces autophagy. In vitro, SRT 1720 increases mitochondrial biogenesis and recovery after oxidation injury and reduces palmitate-induced insulin resistance. Also improves survival and healthspan of obese mice.

Physical and Chemical Properties:

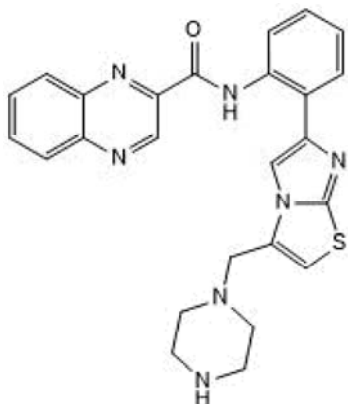
Batch Molecular Formula: $C_{25}H_{23}N_7OS \cdot 2\frac{1}{4}H_2O$

Batch Molecular Weight: 510.09

Physical Appearance: Yellow solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 5 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:

Paramesha et al (2021) Sirt1 and Sirt3 activation improved cardiac function of diabetic rats via modulation of mitochondrial function. *Antioxidants (Basel)* **10** 338. PMID: 33668369.

Tan et al (2021) SRT1720 inhibits the growth of bladder cancer in organoids and murine models through the SIRT1-HIF axis. *Oncogene* **40** 6081. PMID: 34471236.

Luo et al (2019) Sirt1 promotes autophagy and inhibits apoptosis to protect cardiomyocytes from hypoxic stress. *Int.J.Mol.Med.* **43** 2033. PMID: 30864731.

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