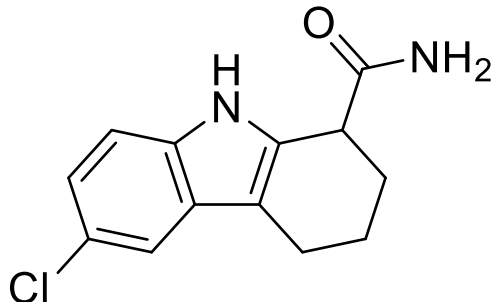


Product data sheet



MedKoo Cat#: 319734 Name: Selisistat CAS#: 49843-98-3 Chemical Formula: C ₁₃ H ₁₃ ClN ₂ O Exact Mass: 248.0716 Molecular Weight: 248.71		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Selisistat, also known as EX-527, is a SirT1 inhibitor for treatment of Huntington's disease. Selisistat is widely used as a major inhibitor of Sirtuin enzymes, which are a family of highly conserved protein deacetylases and have been linked with caloric restriction and aging by modulating energy metabolism, genomic stability, and stress resistance.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	18.65	75
Ethanol	12.44	50

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.02 mL	20.10 mL	40.21 mL
5 mM	0.80 mL	4.02 mL	8.04 mL
10 mM	0.40 mL	2.01 mL	4.02 mL
50 mM	0.08 mL	0.40 mL	0.80 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Zhang W, Cui J, Li L, Chai L, Hou Q, Yu H. Notoginsenoside R1 inhibits hepatitis B virus replication by modulating SIRT1 activity. *Acta Virol.* 2023;67(1):51-58. doi: 10.4149/av_2023_105. PMID: 36950885.

In vivo study

- Kundu A, Dey P, Park JH, Kim IS, Kwack SJ, Kim HS. EX-527 Prevents the Progression of High-Fat Diet-Induced Hepatic Steatosis and Fibrosis by Upregulating SIRT4 in Zucker Rats. *Cells.* 2020 Apr 29;9(5):1101. doi: 10.3390/cells9051101. PMID: 32365537; PMCID: PMC7290750.
- Nikseresht S, Khodagholi F, Ahmadiani A. Protective effects of ex-527 on cerebral ischemia-reperfusion injury through necroptosis signaling pathway attenuation. *J Cell Physiol.* 2019 Feb;234(2):1816-1826. doi: 10.1002/jcp.27055. Epub 2018 Aug 1. PMID: 30067864.

7. Bioactivity

Biological target:

Selisistat is a potent and selective SirT1 (Sir2 in *Drosophila melanogaster*) inhibitor with an IC₅₀ of 123 nM for SirT1. Selisistat inhibits Sirtuins by exploiting their unique NAD⁺-dependent deacetylation mechanism. Galectin-9 in combination with Selisistat

Product data sheet



prolongs the survival of cardiac allografts in mice after cardiac transplantation. Selisistat alleviates pathology in multiple animal and cell models of Huntington's disease.

In vitro activity

Selisistat suppressed hepatitis B replication by silencing the expression of SIRT1, therefore inhibiting its activity.

Reference: Acta Virol. 2023;67(1):51-58. <https://pubmed.ncbi.nlm.nih.gov/36950885/>

In vivo activity

Selisistat prevented the progression of high-fat diet-induced hepatic steatosis and fibrosis in Zucker rats, making it a promising candidate HFD-induced liver fibrosis inhibition. Selisistat reduced the serum levels of triglyceride, total cholesterol, alanine aminotransferase, and aspartate aminotransferase, and attenuated hepatic fibrosis. Selisistat upregulated SIRT2, SIRT3, and SIRT4 expression in the liver of HFD fed rats but downregulated TGF- β 1 and α -SMA expression. It decreased proinflammatory cytokine production and hydroxyproline levels in the serum and SMAD4 expression and restored apoptotic protein expression.

Reference: Cells. 2020 Apr 29;9(5):1101. <https://pubmed.ncbi.nlm.nih.gov/32365537/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.