Product data sheet



MedKoo Cat#: 596245				
Name: Quisinostat				
CAS: 875320-29-9 (free base)				
Chemical Formula: $C_{21}H_{26}N_6O_2$				
Exact Mass: 394.2117				
Molecular Weight: 394.48				
Product supplied as:	Powder			
Purity (by HPLC):	$\geq 98\%$			
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:

Quisinostat is an experimental drug candidate for the treatment of cancer. It is a "second generation" histone deacetylase inhibitor with antineoplastic activity. It is highly potent against class I and II HDACs.

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	50	126.75

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.54 mL	12.68 mL	25.35 mL
5 mM	0.51 mL	2.54 mL	5.07 mL
10 mM	0.25 mL	1.27 mL	2.54 mL
50 mM	0.05 mL	0.25 mL	0.51 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

- Chowdhury A, Marin A, Weber DJ, Andrianov AK. Nano-Assembly of Quisinostat and Biodegradable Macromolecular Carrier Results in Supramolecular Complexes with Slow-Release Capabilities. Pharmaceutics. 2021 Nov 2;13(11):1834. doi: 10.3390/pharmaceutics13111834. PMID: 34834249; PMCID: PMC8619266.
- Kommalapati VK, Kumar D, Tangutur AD. Quisinostat mediated autophagy is associated with differentiation in neuroblastoma SK-N-SH cells. Mol Biol Rep. 2021 May;48(5):4973-4979. doi: 10.1007/s11033-021-06481-z. Epub 2021 Jun 14. PMID: 34125328.

In vivo study

- Sun S, Xiu C, Chai L, Chen X, Zhang L, Liu Q, Chen J, Zhou H. HDAC inhibitor quisinostat prevents estrogen deficiencyinduced bone loss by suppressing bone resorption and promoting bone formation in mice. Eur J Pharmacol. 2022 Jul 15;927:175073. doi: 10.1016/j.ejphar.2022.175073. Epub 2022 May 28. PMID: 35636521.
- 2. Mao L, Liu L, Zhang T, Qin H, Wu X, Xu Y. Histone Deacetylase 11 Contributes to Renal Fibrosis by Repressing KLF15 Transcription. Front Cell Dev Biol. 2020 Apr 17;8:235. doi: 10.3389/fcell.2020.00235. PMID: 32363192; PMCID: PMC7180197.

7. Bioactivity

Biological target:

Product data sheet



Quisinostat is a second-generation, orally active pan-HDAC inhibitor, with IC50 values from 0.11 nM to 0.64 nM for HDAC1, HDAC2, HDAC4, HDAC10 and HDAC11.

In vitro activity

This study investigated the effect of Quisinostat on neuroblastoma SK-N-SH cells differentiation. Quisinostat induces differentiation in SK-N-SH cells. This study also observed that autophagy plays an important role in Quisinostat induced cell differentiation of SK-N-SH cells. Autophagy is induced upon Quisinostat treatment and is important for the neuronal differentiation of human SK-N-SH cells.

Reference: Mol Biol Rep. 2021 May;48(5):4973-4979. https://pubmed.ncbi.nlm.nih.gov/34125328/

In vivo activity

Quisinostat inhibits osteoclast differentiation in vitro and protects mice from titanium particle-induced osteolysis in vivo. This study demonstrated that Quisinostat can ameliorate estrogen deficiency-induced osteoporosis by inhibiting bone resorption and promoting bone formation; this is the first evidence to support Quisinostat as a potential therapeutic agent for postmenopausal osteoporosis prevention and treatment.

Reference: Eur J Pharmacol. 2022 Jul 15;927:175073. https://pubmed.ncbi.nlm.nih.gov/35636521/

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.