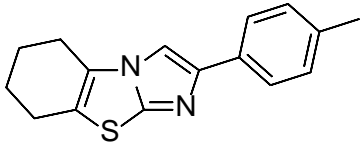


Product data sheet



MedKoo Cat#: 555210 Name: Pifithrin-beta HBr CAS: 511296-88-1 (HBr) Chemical Formula: C ₁₆ H ₁₇ BrN ₂ S Molecular Weight: 349.29	 H-Br
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:

Pifithrin-beta, also known as QB102 and Cyclic-Pifithrin- α , is a p53 functional inhibitor. Pifithrin- β counteracts the Alzheimer peptide non- β -amyloid component effects in human SH-SY5Y cells.

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
DMF	10.0	28.63
DMF:PBS (pH 7.2) (1:6)	0.14	0.40
DMSO	18.11	51.84
Ethanol	1.75	5.01

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.86 mL	14.31 mL	28.63 mL
5 mM	0.57 mL	2.86 mL	5.73 mL
10 mM	0.29 mL	1.43 mL	2.86 mL
50 mM	0.06 mL	0.29 mL	0.57 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

- Chen DZ, Wang WW, Chen YL, Yang XF, Zhao M, Yang YY. miR-128 is upregulated in epilepsy and promotes apoptosis through the SIRT1 cascade. *Int J Mol Med*. 2019 Aug;44(2):694-704. doi: 10.3892/ijmm.2019.4223. Epub 2019 May 30. PMID: 31173166.
- Da Pozzo E, La Pietra V, Cosimelli B, Da Settimo F, Giacomelli C, Marinelli L, Martini C, Novellino E, Taliani S, Greco G. p53 functional inhibitors behaving like pifithrin- β counteract the Alzheimer peptide non- β -amyloid component effects in human SH-SY5Y cells. *ACS Chem Neurosci*. 2014 May 21;5(5):390-9. doi: 10.1021/cn4002208. Epub 2014 Mar 28. PMID: 24646317; PMCID: PMC4030802.

In vivo study

TBD

7. Bioactivity

Biological target:

Pifithrin- β hydrobromide (PFT β hydrobromide) is a potent p53 inhibitor with an IC₅₀ of 23 μ M.

Product data sheet



In vitro activity

The present study aimed to examine the functional and molecular effects of miR-128 in epilepsy, in order to investigate its potential protective mechanisms. Firstly, miR-128 expression in rats with lithium chloride-induced epilepsy was demonstrated to be increased compared with the control rats. Subsequently, results from an in vitro epilepsy model demonstrated that overexpression of miR-128 promoted nerve cell apoptosis, increased the protein expression of tumor protein p53, BCL2 associated X (Bax) and Cytochrome c, and enhanced caspase-3/9 activity, whereas it suppressed the protein expression of sirtuin 1 (SIRT1). In addition, these alterations may be reversed by the downregulation of miR-128. Furthermore, treatment with CAY10602, a SIRT1 agonist, reduced the effects of miR-128 on nerve cells in vitro. Treatment with pifithrin- β hydrobromide, a p53 inhibitor, was additionally able to mitigate the effects of miR-128 in vitro.

Reference: Int J Mol Med. 2019 Aug;44(2):694-704. <https://pubmed.ncbi.nlm.nih.gov/31173166/>

In vivo activity

TBD

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.