

Product data sheet



MedKoo Cat#: 406602 Name: Pyridostatin TFA salt CAS#: 1472611-44-1 (TFA) Chemical Formula: C ₃₇ H ₃₅ F ₉ N ₈ O ₁₁ Molecular Weight: 938.72	
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:

Pyridostatin stabilizes G-quadruplexes (G4s) in cells and elicits a DNA damage response by causing the formation of DNA double strand breaks (DSB). Pyridostatin promotes growth arrest in human cancer cells by inducing replication- and transcription-dependent DNA damage. Pyridostatin targets gene bodies containing clusters of sequences with a propensity for G-quadruplex formation. As a result, pyridostatin modulated the expression of these genes, including the proto-oncogene SRC.

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	20.0	21.3

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.07 mL	5.33 mL	10.65 mL
5 mM	0.21 mL	1.07 mL	2.13 mL
10 mM	0.11 mL	0.53 mL	1.07 mL
50 mM	0.02 mL	0.11 mL	0.21 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

1. Real-Hohn A, Zhu R, Ganjian H, Ibrahim N, Hinterdorfer P, Kowalski H, Blaas D. Catching Common Cold Virus with a Net: Pyridostatin Forms Filaments in Tris Buffer That Trap Viruses-A Novel Antiviral Strategy? *Viruses*. 2020 Jul 4;12(7):723. doi: 10.3390/v12070723. PMID: 32635420; PMCID: PMC7412420.
2. Moruno-Manchon JF, Koellhoffer EC, Gopakumar J, Hambarde S, Kim N, McCullough LD, Tsvetkov AS. The G-quadruplex DNA stabilizing drug pyridostatin promotes DNA damage and downregulates transcription of Brca1 in neurons. *Aging (Albany NY)*. 2017 Sep 12;9(9):1957-1970. doi: 10.18632/aging.101282. PMID: 28904242; PMCID: PMC5636668.

In vivo study

TBD

7. Bioactivity

Biological target:

Pyridostatin (RR82) TFA is a G-quadruplex DNA stabilizing agent (K_d=490 nM).

In vitro activity

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For cell lines, the drug is cytotoxic, and this study, therefore, hypothesized that pyridostatin may be toxic for primary neurons as well. To test this, primary rat cortical cultures were transfected with the mApple construct (a red fluorescent protein). Pyridostatin or vehicle was added, and the mApple-expressing neurons were tracked for several days with an automated microscope. Loss of the red mApple fluorescence is a sensitive marker of neuronal death. This study found that treatment with pyridostatin substantially increased the risk of neuronal death in a dose-dependent manner (Fig. 1E). Notably, neurons exposed to pyridostatin retracted neurites before death (Fig. 1D), mimicking neuro-degenerative processes commonly observed in neurons that express α -synuclein, mutant LRRK2 or mutant huntingtin.

Reference: Aging (Albany NY). 2017 Sep; 9(9): 1957–1970. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5636668/>

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.