Product Datasheet

Pyridostatin TFA

Catalog No. **BP-02314B** · CAS **1472611-44-1** · Form **salt · salt** · Physical state **other** · Color **White to off-white** · Version **1.0** · Revision **2026-09-11**

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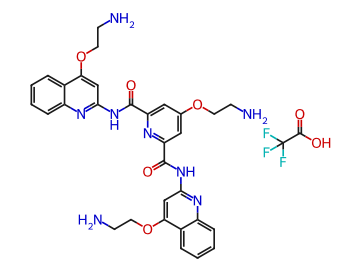
Target	Research area
DNA/RNA Synthesis; G-quadruplex; Flavivirus; Src; Virus Protease	**Cancer**

Molecular formula	$C_{33}H_{33}F_3N_8O_7$
Molecular weight	**710.6597**

STRUCTURE



DESCRIPTION

Pyridostatin (RR82) TFA is a G-quadruplex DNA stabilizing agent (Kd=490 nM). Pyridostatin TFA promotes growth arrest in human cancer cells by inducing replication- and transcription-dependent DNA damage. Pyridostatin TFA targets the proto-oncogene Src. Pyridostatin TFA reduced SRC protein levels and SRC-dependent cellular motility in human breast cancer cells.

BIOLOGICAL ACTIVITY

Pyridostatin Trifluoroacetate Salt is a G-quadruplexe stabilizer, with a Kd of 490 nM. 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. Pyridostatin (PDS) shows neurotoxic activity against primary cortical neurons at 0.01-5 μM, causes DNA double-strand breaks (DSBs) at 1 μM, downregulates BRCA1 in neurons at 1, 2 or 5 μM.

SOLUBILITY

Soluble in H2O

In vitro	H2O : 100 mg/mL

REFERENCES

[1]. Rodriguez R, et al. Small-molecule-induced DNA damage identifies alternative DNA structures in human genes. Nat Chem Biol. 2012;8(3):301-310. Published 2012 Feb 5.

[2]. Koirala D, et al. A single-molecule platform for investigation of interactions between G-quadruplexes and small-molecule ligands. Nat Chem. 2011;3(10):782-787. Published 2011 Aug 28.

[3]. Moruno-Manchon JF, et al. The G-quadruplex DNA stabilizing drug pyridostatin promotes DNA damage and downregulates transcription of Brca1 in neurons. Aging (Albany NY). 2017;9(9):1957-1970.

[4]. Zhang X, et al. Chemical profiling of DNA G-quadruplex-interacting proteins in live cells. Nat Chem. 2021 Jul;13(7):626-633.

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