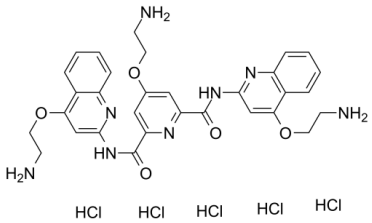
Data Sheet

Product Name:	Pyridostatin (hydrochloride)
Cat. No.:	CS-3851
CAS No.:	1781882-65-2
Molecular Formula:	C31H37Cl5N8O5
Molecular Weight:	778.94
Target:	G-quadruplex
Pathway:	Cell Cycle/DNA Damage
Solubility:	H2O : 50 mg/mL (64.19 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Pyridostatin hydrochloride (RR82 hydrochloride) is a **G-quadruplexe** stabilizer, with a **K_d** of 490 nM. IC50 & Target: Kd: 490 nM (G-quadruplexe)[1] **In Vitro:** Pyridostatin hydrochloride is a G-quadruplexe stabilizer, with a K_d of 490 nM[1]. 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[2]. Pyridostatin interacts with G-quadruplex motifs in SRC and alters mRNA levels of damaged genes [3].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [3]Cells are plated at equal confluence and either untreated or treated with 2 μM Pyridostatin continually for 72 h. Cells from individual plates are trypsinized and counted in a Coultercounter. Graphs represent total cell numbers at each time interval and error bars represent S.E.M. Data represent three independent experiments[3].

References:

[1]. Koirala D, et al. A single-molecule platform for investigation of interactions between G-quadruplexes and small-molecule ligands. Nat Chem. 2011 Aug 28;3(10):782-7.

[2]. 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 Sep 12;9(9):1957-1970.

[3]. Rodriguez R, et al. Small-molecule-induced DNA damage identifies alternative DNA structures in human genes. Nat Chem Biol. 2012 Feb 5;8(3):301-10.

CAIndexNames:

2,6-Pyridinedicarboxamide, 4-(2-aminoethoxy)-N2,N6-bis[4-(2-aminoethoxy)-2-quinolinyl]-, hydrochloride (1:5)

SMILES:

O=C(C1=CC(OCCN)=CC(C(NC2=NC3=C(C(OCCN)=C2)C=CC=C3)=O)=N1)NC4=CC(OCCN)=C5C=CC=CC5=N4.Cl.Cl.Cl.Cl.Cl

Caution: Product has not been fully validated for medical applications. For research use only.

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