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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Pyridostatin TFA

Cat. No.: HY-15176B

CAS No.: 1472611-44-1

Molecular Formula: $C_{33}H_{33}F_3N_8O_7$

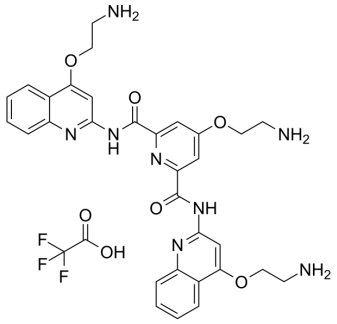
Molecular Weight: 710.66

Target: G-quadruplex

Pathway: Cell Cycle/DNA Damage

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (140.71 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4071 mL	7.0357 mL	14.0714 mL
	5 mM	0.2814 mL	1.4071 mL	2.8143 mL
	10 mM	0.1407 mL	0.7036 mL	1.4071 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Pyridostatin (RR82) TFA is a G-quadruplex DNA stabilizing agent (K_d=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[1][2][3].

In Vitro

Pyridostatin (RR82) hydrochloride (10 μM; 48 hours) induces cell cycle arrest[1].

Pyridostatin TFA is a very selective G-quadruplex DNA-binding small molecule designed to form a complex with and stabilize G-quadruplex structure. Pyridostatin TFA causes neurite retraction, synaptic loss, and dose-dependent neuronal death. In cultured primary neurons, Pyridostatin TFA induces the formation of DNA DSBs. Remarkably, Pyridostatin TFA (1-5 μM, overnight) downregulates the BRCA1 protein, a protein that guards and repairs the neuronal genome, at the transcriptional level[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Over 60 different cancer cell lines

Concentration:	10 μM
Incubation Time:	48 hours
Result:	Predominantly accumulated in the G2 phase of the cell cycle over 60 different cancer cell lines.

CUSTOMER VALIDATION

- J Hepatol. 2020 Aug;73(2):371-382.
- Nat Commun. 2022 Sep 16;13(1):5456.
- Nat Commun. 2022 Mar 17;13(1):1444.
- Mol Cell. 2024 Apr 26:S1097-2765(24)00285-5.
- J Am Chem Soc. 2021 Dec 6.

See more customer validations on www.MedChemExpress.com

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.

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

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