

Product Data Sheet

Product Name: 360A
Cat. No.: GC15389

Chemical Properties

Cas. No. 794458-56-3

Chemical Name 3,3'-((pyridine-2,6-dicarbonyl)bis(azanediyl))bis(1-methylquinolin-1-ium)

SMILES CN1=C2C=CC=CC2=C/C(C=1)=[NH+]/C(C3=NC(C([NH+]=C4C=C5C=CC=CC5=N(C)=C/4)=O)=CC=C3)=O

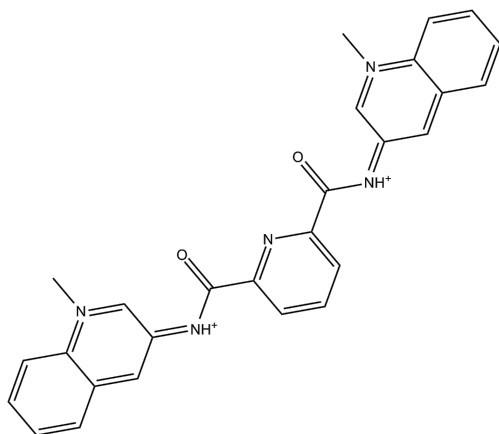
Formula $C_{27}H_{23}N_5O_2 \cdot 2+$ M.Wt 449.5

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

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

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Cell experiment: The cell proliferation reagent WST-1 assay is performed. In brief, cells are seeded at various densities, depending on cell type ($0.25-4 \times 10^3$ cells/well in 100 μ L complete medium), in 96-well culture plates and treated with various concentrations (0.1-20 μ M) of 360A or the corresponding concentrations of DMSO (control wells) for 3 or 7 days at 37°C in an atmosphere containing 5% CO₂. For 7-day assays, the medium is changed on day 3. Experiments are performed in triplicate[1].

References:

[1]. Pennarun G, et al. Apoptosis related to telomere instability and cell cycle alterations in human glioma cells treated by new highly selective G-quadruplex ligands. *Oncogene*. 2005 Apr 21;24(18):2917-28.

[2]. Gauthier LR, et al. Rad51 and DNA-PKcs are involved in the generation of specific telomere aberrations induced by the quadruplex ligand 360A that impair mitotic cell progression and lead to cell death. *Cell Mol Life Sci*. 2012 Feb;69(4):629-40.

Background

Description: IC₅₀ Value: N/A 360A is a 2,6-pyridine-dicarboxamide derivative displaying strong affinity and selectivity for G-quadruplex structures and selective telomerase inhibition in vitro assays. 360A is a G-quadruplex ligand, which can influence the consequence of G-quadruplex formation and/or stabilization. in vitro: We found a S-phase accumulation in ATM-proficient, but not in ATM-deficient EBV-lymphocytes treated with 360A before induction of cell death. However, ATM status did not modify cell cycle distribution in 360A-treated SV40-fibroblasts and HeLa cells compared to DMSO treated controls [1]. DNA-PKcs-dependent NHEJ was responsible for sister telomere fusions as a direct consequence of G-quadruplex formation and/or stabilization induced by 360A on parental telomere G strands. NHEJ and HR activation at telomeres altered mitotic progression in treated cells [2]. This compound was shown to display a potent affinity and selectivity for telomeric G-quadruplex DNA over duplex DNA and to induce delayed growth inhibition in HT1080 tumor cell line [3]. in vivo: N/A Clinical trial: N/A

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