Data Sheet (Cat.No.T4251)

TargetMol

GJ103 sodium salt

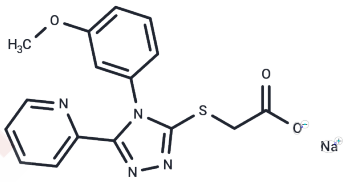
Chemical Properties

CAS No. : 1459687-96-7

Formula: C16H13N4NaO3S

Molecular Weight: 364.36

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	GJ103 sodium salt is an active analog of GJ072, a read-through compound. It has been shown to reduce the surface tension of aqueous solutions, which makes it easier for molecules to move through the solution. It has also been shown to reduce the viscosity of aqueous solutions, which makes it easier for molecules to move through the solution. Additionally, it has been shown to reduce the pH of aqueous solutions, which can have a variety of effects on the biochemical and physiological processes of living organisms.
Targets(IC50)	ATM/ATR,Others,DNA/RNA Synthesis
In vitro	GJ072 induces ATM kinase on both TGA and TAG stop codons and restored ATMpSer1981 autophosphorylation and SMC1pSer966 transphosphorylation as measured by FACS. GJ072 is active in A-T cells with a homozygous TAA mutation. GJ072 is able to induce detectable full-length ATM protein in treated A-T cells. Early structure-activity relationship studies generates eight active analogs of GJ072. Some GJ072 analogs (e.g., GJ103, GJ106, GJ109, and GJ111) consistently demonstrates their activities in all three PTCs by both FCATMpSer1981 and IRIF assays. GJ071 and GJ072 and some of their analogs (such as GJ103) have similar read-through activity as RTC13 or RTC14, but are more tolerable than RTC13 and RTC14 to A-T cells. GJ103 does not show obvious cytotoxicity in A-T cells at concentration as high as 300 μM.
In vivo	GJ103 sodium salt is water soluble, which will enable us to evaluate its in vivo activity by systematic administration.
Cell Research	Cell proliferation assay is used to measure cytotoxicity. Cells are seeded into a flat-bottom 96-well plate, including control wells containing complete growth medium alone as blank absorbance readings. After RTC treatment (GJ103), activated-XTT Solution is added into each well, and the cells are returned to the cell culture incubator for 12-14 hours. The absorbance is measured at 480 nM with relevant 630 nM to assess nonspecific readings.

Solubility Information

Solubility	H2O: Soluble, DMSO: 50 mg/mL (137.23 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2.5 mg/mL (6.86 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7445 mL	13.7227 mL	27.4454 mL
5 mM	0.5489 mL	2.7445 mL	5.4891 mL
10 mM	0.2745 mL	1.3723 mL	2.7445 mL
50 mM	0.0549 mL	0.2745 mL	0.5489 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Du L, et al. A new series of small molecular weight compounds induce read through of all three types of nonsense mutations in the ATM gene. Mol Ther. 2013 Sep;21(9):1653-60.