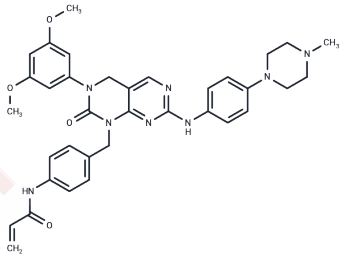
Data Sheet (Cat.No.T6836)

TargetMol

FIIN-2

Chemical Properties



CAS No. : 1633044-56-0

Formula: C35H38N8O4

Molecular Weight: 634.73

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	FIIN-2, an irreversible, pan-FGFR inhibitor, inhibits FGFR1/2/3/4 with IC50 of 3.09 nM, 4.3 nM, 27 nM and 45.3 nM, respectively.
Targets(IC50)	FGFR
In vitro	In FGFR1-4 Ba/F3 cells, FIIN-2 inhibits cell proliferation with EC50 in the single- to double-digit nanomolar range. FIIN-2 also shows excellent antiproliferative activity in a variety of backgrounds, including cell lines that have gatekeeper mutations in FGFR1 and that are dependent on FGFR4. [1]
In vivo	In a zebrafish developmental model, FIIN-2 causes mild or severe phenotypes to the tail morphogenesis by inhibiting FGFR. [1]
Kinase Assay	Biochemical assays: Biochemical assays are performed by a broad-coverage, TR-FRET-based kinase binding assay platform.
Cell Research	NCI-H2077, NCI-H1581, H520, Kato III, AN3CA, RT112, A2780, 4T1, and SKOV-3 cells are treated with inhibitors 1 d after being plated at a density of 1,500 cells per well in 96-well plates. The gatekeeper mutation cell lines are generated by ectopically overexpressing FGFR1 V561M in either NCI-H2077 or NCI-H1581 cells via lentiviral transduction. Cell survival is assessed at 96 h following the addition of inhibitor using the Cell-Titer-Glo reagent according to the manufacturer's instructions. EC50 values are calculated using GraphPad Prism 5. SKOV-3 cells also are treated in the presence of FGF or EGF ligand. Proliferation measurements were made after 96 h using a luminometer. Data are shown as relative values: The luminescence of cells with indicated inhibitor dose is compared with that of untreated cells.(Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 64 mg/mL (100.83 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 mg/mL (3.15 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	1.5755 mL	7.8774 mL	15.7547 mL
5 mM	0.3151 mL	1.5755 mL	3.1509 mL
10 mM	0.1575 mL	0.7877 mL	1.5755 mL
50 mM	0.0315 mL	0.1575 mL	0.3151 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

Tan L, et al. Proc Natl Acad Sci U S A. 2014, 111(45), E4869-4877.
Yang Y L, Cao L B, He W R, et al. Endocytosis triggers V-ATPase-SYK-mediated priming of cGAS activation and innate immune response. Proceedings of the National Academy of Sciences. 2022, 119(43): e2207280119.