

Product Data Sheet

Product Name: ON1231320

Cat. No.: GC62174

Chemical Properties

Cas. No. 1312471-39-8

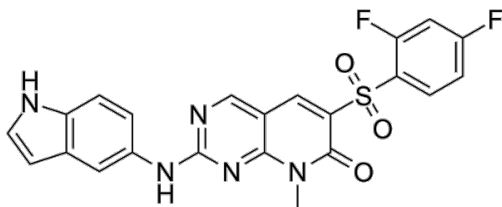
Formula $C_{22}H_{15}F_2N_5O_3S$ M.Wt 467.45

Solubility DMSO : 25 mg/mL (53.48 mM; Need ultrasonic) 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



Background

ON1231320 is a highly specific polo like kinase 2 (PLK2) inhibitor with an IC₅₀ of 0.31 μM. ON1231320 blocks tumor cell cycle progression in the G2/M phase in mitosis, causing apoptotic cell death. ON1231320, an arylsulfonyl pyrido-pyrimidinone, has antitumor activity[1][2].

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

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ON1231320 (Compound 7ao) has no inhibitory activity against PLK1, PLK3 and PLK4 (all $IC_{50} > 10 \mu M$)[1]. ON1231320 (0-5 μM ; 24 hours) activates programmed cell death in human tumor cells[1]. ON1231320 inhibits cell proliferation in 16 tumor cell lines (DU145, MCF-7, BT474, SK-OV-3, MIA-PaCa-2, SK-MEL-28, A549, U87, COLO-205, HELA, H1975, RAJI, U205, K562, GRANTA-519; $IC_{50} = 0.035-0.2 \mu M$)[1]. ON1231320 does not appreciably inhibit tubulin polymerization[1]. ON1231320 does not affect normal human fibroblasts[2].

ON1231320 (Compound 7ao; 75 mg/kg; IP; alternate days (Q2D) for 20 days) results in significant inhibition of tumor growth[1].

[1]. M V Ramana Reddy, et al. Discovery of 2-(1H-indol-5-ylamino)-6-(2,4-difluorophenylsulfonyl)-8-methylpyrido[2,3-d]pyrimidin-7(8H)-one (7ao) as a potent selective inhibitor of Polo like kinase 2 (PLK2). Bioorg Med Chem. 2016 Feb 15;24(4):521-44.

[2]. Shashidhar S. Jatiani, et al. Abstract 643: Targeting cancer with a selective ATP-mimetic inhibitor of polo like kinase-2.

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