

DS-7423

Chemical Properties

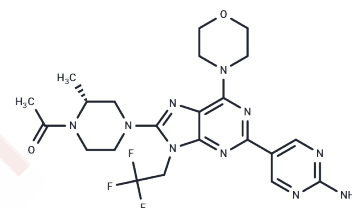
CAS No. : 1222104-37-1

Formula: C22H27F3N10O2

Molecular Weight: 520.51

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	<p>DS-7423 is a dual PI3K and mTOR inhibitor, with IC50 values of 15.6 nM and 34.9 nM for PI3Kα and mTOR, respectively, and exhibits anti-tumor activity[1][2]. It increases TP53 expression, the level of p-TP53 on Ser-46, and induces apoptosis-related TP53 target genes (TP53AIP1 and PUMA) in OCCC cells[1]. DS-7423 also inhibits other isoforms of class I PI3K with IC50 values of 1,143 nM for PI3Kβ, 249 nM for PI3Kγ, and 262 nM for PI3Kδ[2].</p> <p>[1]. Katsutoshi Oda, et al. Characterization of TP53 and PI3K signaling pathways as molecular targets in gynecologic malignancies. J Obstet Gynaecol Res. 2016 Jul;42(7): 757-62. [2]. Tomoko Kashiya, et al. Antitumor activity and induction of TP53-dependent apoptosis toward ovarian clear cell adenocarcinoma by the dual PI3K/mTOR inhibitor DS-7423. PLoS One. 2014 Feb 4;9(2):e87220.</p>
Targets(IC50)	mTOR,PI3K
In vitro	<p>DS-7423 elevates TP53 expression, enhances p-TP53 on Ser-46 phosphorylation, and stimulates apoptosis-related TP53 target genes (TP53AIP1 and PUMA) in OCCC cells[1]. Additionally, it selectively inhibits class I PI3K isoforms with varying IC50 values: PI3Kβ at 1,143 nM, PI3Kγ at 249 nM, and PI3Kδ at 262 nM[2].</p>

Solubility Information

Solubility	DMSO: 65 mg/mL (124.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	<p>10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.84 mM),Sonication is recommended.</p> <p><i>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.</i></p>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9212 mL	9.606 mL	19.2119 mL
5 mM	0.3842 mL	1.9212 mL	3.8424 mL
10 mM	0.1921 mL	0.9606 mL	1.9212 mL
50 mM	0.0384 mL	0.1921 mL	0.3842 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

Katsutoshi Oda, et al. Characterization of TP53 and PI3K signaling pathways as molecular targets in gynecologic malignancies. *J Obstet Gynaecol Res.* 2016 Jul;42(7):757-62.

Tomoko Kashiya, et al. Antitumor activity and induction of TP53-dependent apoptosis toward ovarian clear cell adenocarcinoma by the dual PI3K/mTOR inhibitor DS-7423. *PLoS One.* 2014 Feb 4;9(2):e87220.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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