
Product Data Sheet

Product Name: AZD-5597

Cat. No.: GC12826

Chemical Properties

Cas. No. 924641-59-8

Chemical Name (S)-(4-((5-fluoro-4-(1-isopropyl-2-methyl-1H-imidazol-5-yl)pyrimidin-2-yl)amino)phenyl)(3-(methylamino)pyrrolidin-1-yl)methanone

SMILES CC(N1C(C)=NC=C1C2=NC(NC3=CC=C(C(N4CC[C@@](NC)([H])C4)=O)C=C3)=NC=C2F)CFormula C₂₃H₂₈FN₇O M.Wt 437.51

Solubility ≥ 15.65mg/mL 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 **Background**

AZD-5597 is a potent CDK inhibitor with IC₅₀ values of 2 nM for CDK1 and CDK2, respectively [1].

The cyclin-dependent kinases (CDKs) are serine-threonine protein kinases with roles in the regulation of the cell cycle, and also involved in regulating transcription, mRNA processing, and the differentiation of nerve cells [1].

AZD-5597 is a potent imidazole pyrimidine amide CDK inhibitor. In LoVo cells, AZD-5597 exhibited high level of anti-proliferative activity with IC₅₀ value of 0.039 μM. AZD-5597 exhibited excellent aqueous solubility (> 50 mg/mL), photostability (t_{1/2} > 24 h), hydrolytic stability (pH 4-10, t_{1/2} > 100 days), plasma stability (> 18 h) and the lack of CYP inhibition. The overall profile of AZD-5597 indicated that it was suitable for further development as an iv agent [1].

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

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In nude mouse and rat, AZD-5597 possessed good pharmacokinetic parameters with moderate to low clearance. In nude mice implanted subcutaneously with SW620 human colon adenocarcinoma cells, AZD-5597 (15 mg/kg, dosed intermittently for 3 weeks, ip) inhibited tumour volume by 55% [1].

Reference:

[1]. Jones CD, Andrews DM, Barker AJ, et al. The discovery of AZD5597, a potent imidazole pyrimidine amide CDK inhibitor suitable for intravenous dosing. *Bioorganic & Medicinal Chemistry Letters*, 2008, 18(24): 6369-6373.

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