

Product Data Sheet

Product Name: AZD7507

Cat. No.: GC19404

Chemical Properties

Cas. No. 1041852-85-0

Chemical Name 4-(2-fluoro-4-methylanilino)-6-[4-(2-hydroxyethyl)piperazin-1-yl]-7-methoxycinnoline-3-carboxamide

SMILES O=C(C1=NN=C2C=C(OC)C(N3CCN(CCO)CC3)=CC2=C1NC4=CC=C(C)C=C4F)N

Formula $C_{23}H_{27}FN_6O_3$ M.Wt 454.51

Solubility Soluble 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 sizes: ship with RT, or blue ice upon request.

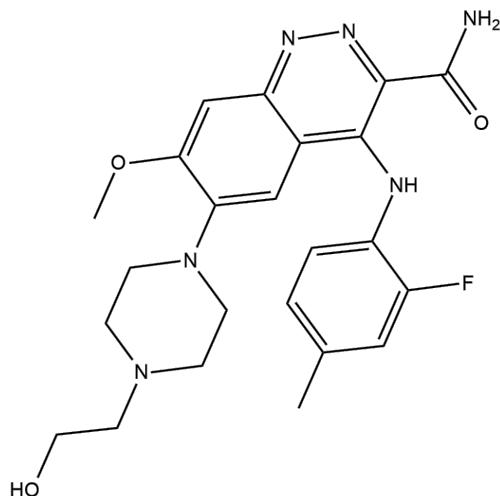
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Protocol

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Animal experiment: Mice[2] Male CD1 nude mice are injected subcutaneously with 5×10^5 human ICC cells from human cell line WITT-1, CC-LP-1, or SNU-1079 ($n = 24$ in all cases) suspended in culture media/RGF Matrigel (Gibco) mix (1:1). Cells are engrafted bilaterally in the flank and allowed to form tumors over 3 weeks. Once palpable tumors have formed, mice are randomized into 3 groups using GraphPad online software. Xenografted mice are injected with liposomal clodronate at $4 \mu\text{L/g}$ intravenously. The control for this treatment is saline alone or liposomes not containing clodronate (both given at $4 \mu\text{L/g}$ intravenously). All of these treatments are given every 48 hours for 3 weeks. CSFR1 inhibitors AZD7507 and GW2580 are made up in sterile water containing 0.5% methylcellulose and 0.1% Tween-80. AZD7507 is given twice daily at 100 mg/kg, whereas GW2580 is given daily at 160 mg/kg. Control animals are given water containing 0.5% methylcellulose and 0.1% Tween-80. ICG-001 (5 mg/kg) or C-59 (20 mg/kg) is given by intraperitoneal injection. The vehicle for this is physiological saline. Control animals are given vehicle alone. In all cases inhibitors and vehicle are given 3 times per week[2].

References:

- [1]. Scott DA, et al. Mitigation of cardiovascular toxicity in a series of CSF-1R inhibitors, and the identification of AZD7507. Bioorg Med Chem Lett. 2013 Aug 15;23(16):4591-6.
- [2]. Boulter L, et al. WNT signaling drives cholangiocarcinoma growth and can be pharmacologically inhibited. Send to J Clin Invest. 2015 Mar 2;125(3):1269-85.

Background

AZD7507 is a potent and selective CSF-1R inhibitor (32 nM cell activity), AZD7507 is considered a promising compound as it retained the desired potency and oral pharmacokinetic properties of AZ683. Moreover, in a telemetry study in dogs given a single oral dose, there was no cardiovascular toxicity, no elevation of troponin related to the treatment, and no alteration in the ECG.

Reference

1: Boulter L, Guest RV, Kendall TJ, Wilson DH, Wojtacha D, Robson AJ, Ridgway RA, Samuel K,

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Van Rooijen N, Barry ST, Wigmore SJ, Sansom OJ, Forbes SJ. WNT signaling drives cholangiocarcinoma growth and can be pharmacologically inhibited. J Clin Invest. 2015 Mar 2;125(3):1269-85. doi: 10.1172/JCI76452. Epub 2015 Feb 17. PubMed PMID: 25689248; PubMed Central PMCID: PMC4362247.

2: Scott DA, Dakin LA, Daly K, Del Valle DJ, Diebold RB, Drew L, Ezhuthachan J, Gero TW, Ogoe CA, Omer CA, Redmond SP, Repik G, Thakur K, Ye Q, Zheng X. Mitigation of cardiovascular toxicity in a series of CSF-1R inhibitors, and the identification of AZD7507. Bioorg Med Chem Lett. 2013 Aug 15;23(16):4591-6. doi: 10.1016/j.bmcl.2013.06.031. Epub 2013 Jun 20. PubMed PMID: 23842474.

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