
Product Data Sheet

Product Name: CDK4 inhibitor

Cat. No.: GC11785

Chemical Properties

Cas. No. 1256963-02-6

Chemical Name 4-(3-chloro-5-propan-2-yl-1H-pyrazol-4-yl)-N-[5-[4-(dimethylamino)piperidin-1-yl]pyridin-2-yl]pyrimidin-2-amine

SMILES CC(C)C1=C(C(=NN1)Cl)C2=NC(=NC=C2)NC3=NC=C(C=C3)N4CCC(CC4)N(C)C

Formula $C_{22}H_{29}ClN_8$ M.Wt 440.97

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 0.25 mg/ml 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

CDK4 inhibitor is a selective inhibitor of cyclin-dependent kinase 4 with IC₅₀ value of 10 nM [1].

Cyclin-dependent kinase 4 (CDK4) is a Ser/Thr protein kinase and is a member of the cyclin-dependent kinase family. CDK4 plays an important role in the G1-S phase.

CDK4 inhibitor is a selective cyclin-dependent kinase 4 inhibitor. CDK4 inhibitor inhibited CDK4/Cyclin D1, CDK1/Cyclin B and CDK2/Cyclin A with IC₅₀ values of 10 nM, 15 μM and 5.265 μM, respectively. Also, it inhibited protein kinase A (PKA) and glycogen synthase kinase (GSK3β) with IC₅₀ values of 6.8 and 9.6 μM, respectively. In a mantle-cell lymphoma cell line Jeko-1, CDK4 inhibitor inhibited the phosphorylation level of pRb at the Ser780 site with IC₅₀ value of 0.324 μM. Also, CDK4 inhibitor (0.37 μM) showed G1 block on cells [1].

Reference:

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

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[1]. Cho YS, Borland M, Brain C, et al. 4-(Pyrazol-4-yl)-pyrimidines as selective inhibitors of cyclin-dependent kinase 4/6. J Med Chem, 2010, 53(22): 7938-7957.

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