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AZD8055

产品编号: D50765
CAS: 1009298-09-2
分子式: C25H31N5O4
纯度: ≥98%
InChi: InChI=1S/C25H31N5O4/c1-16-14-33-10-8-29(16)24-20-5-6-21(18-4-7-22(32-3)19(12-18)13-31)26-23(20)27-25(28-24)30-9-11-34-15-17(30)2/h4-7,12,16-17,31H,8-11,13-15H2,1-3H3/t16-,17-/m0/s1
InChi Key: KVLFRAWTRWDEDF-IRXDYDNUSA-N
Smiles: COC1=CC=C(C=C1CO)C1C=CC2C(=NC(=NC=2N=1)N1CCOC[C@@H]1C)N1CCOC[C@@H]1C
外观: 固体粉末
作用通路: Apoptosis
溶解性: DMSO up to 100 mM
保存条件: Store in dry, dark place for one year.
产品介绍: AZD8055 is a highly potent, selective and ATP-competitive mTOR inhibitor (IC50 = 0.8 nM). It has >1, 000-fold selectivity against all PI3K isoforms (α, β, γ, δ) and other members of the PI3K-like kinase family (ATM and DNA-PK). It has no significant activity against a panel of 260 kinases at concentrations up to 10 μM. AZD8055 inhibits the phosphorylation of mTORC1 downstream targets (p70S6K and 4E-BP1) as well as phosphorylation of the mTORC2 downstream proteins (e.g., Akt). The rapamycin-resistant T37/46 phosphorylation sites on 4E-BP1 can be fully inhibited by AZD8055, resulting in significant inhibition of cap-dependent translation. AZD8055 potently inhibits proliferation of U87MG, A549 and H838 cells with IC50 of 53, 50, and 20 nM, respectively. It also induces autophagy and increases LC3-II levels in H838 and A549 cells. AZD8055 decreases AML blast cell proliferation and cell cycle progression, reduces the clonogenic growth of leukemic progenitors, and induces caspase-dependent apoptosis in leukemic cells but not in normal immature CD34+ cells. It also shows significant antitumor activity in many xenografts, including U87MG, BT474c, A549, Calu-3, LoVo, SW620, PC3 and MES-SA at a dose of 10-20 mg/kg. AZD8055 was previously evaluated in a phase I clinical study in patients with advanced tumors.