For Research Use Only

AZD-1480

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Catalog Number: CM04884

产品信息

Catalog Number:
CM04884

CAS号:
935666-88-9

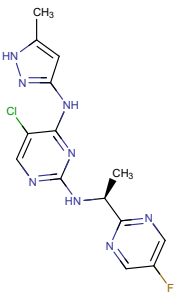
分子式:
$C_{14}H_{14}ClFN_8$

主要靶点:
JAK

主要通路:
表观遗传|JAK/STAT信号通路|干细胞|血管生成

分子量:
348.77

溶解度:
DMSO:64 mg/mL (183.5 mM),H2O: <1 mg/mL,Ethanol:<1 mg/mL



靶点活性

JAK2:0.26 nM

体外活性

AZD1480抑制皮下移植瘤的生长,并通过对STAT3活性的抑制使携带颅内恶性胶质瘤的鼠寿命延长,表明AZD1480对JAK/STAT3通路的抑制作用可用于研究治疗携带颅内恶性胶质瘤的患者.AZD1480可抑制人类实体瘤模型和多发性骨髓瘤模型的STAT3磷酸化.AZD1480可降低人类移植瘤模型的血管生成和代谢.AZD1480对含STAT活性的人类实体瘤的生长有抑制作用.AZD1480对骨髓细胞的肺转移和肺浸润瘤也有抑制作用.

体内活性

通过影响肿瘤的微环境,AZD1480可抑制肿瘤局部转移和血管生成。作为JAK2的有效抑制剂,AZD1480可抑制人类多发性骨髓瘤细胞的生长和存活,并抑制FGFR3和STAT3信号及下游靶点,包括Cyclin D2。低微摩尔浓度AZD1480可诱导骨髓瘤细胞系凋亡和抑制细胞增殖。 AZD1480（5 μM）诱导细胞周期停在G2/M期,并通过抑制Aurora激酶而诱导细胞死亡。在人和鼠神经胶质瘤细胞中,AZD1480有效抑制组成型和诱导型JAK1/2及STAT-3的磷酸化作用 ,从而降低细胞增殖并诱导凋亡。

细胞实验

Renca or 786-O cells are suspended in DMEM medium with 5% FBS , and seeded in 96-well plates (5×103 per well) to allow adhesion and then treated with DMSO or AZD1480 for 48 hours. Cell viability is determined by MTS assay. Absorbance at 490 nm is measured with Mikrotek Laborsysteme. Mouse endothelial cells and splenic CD11b+/c- myeloid cells are enriched from tumor-bearing mice,and cultured in 5% FBS RPMI-1640 medium. HUVECs are cultured on collagen 1–coated plates in complete medium. All cells are treated with DMSO and AZD1480 at various doses for 24 hours. Cell viability is determined by counting cell number manually. All the experiments are repeated 3 times. (Only for Reference)

描述

AZD1480 is a novel ATP-competitive JAK2 inhibitor (IC50: 0.26 nM), selectivity act against Tyk2 and JAK3, and to a smaller extent against JAK1. AZD1480 has been used in trials studying the treatment of Solid Malignancies, Post-Polycythaemia Vera, Primary Myelofibrosis (PMF), and Essential Thrombocythaemia Myelofibrosis.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years