For Research Use Only

Enasidenib

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Catalog Number: CM04695

产品信息

Catalog Number:
CM04695

CAS号:
1446502-11-9

分子式:
$C_{19}H_{17}F_6N_7O$

主要靶点:
IDH

主要通路:
Metabolic Enzyme

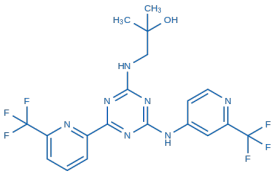
分子量:
473.375

MDL NO:
MFCD29472245

Pubchem ID:
89683805.0

溶解度:

DMSO	94 mg/mL
Water	Insoluble
Ethanol	93 mg/mL



靶点

Target	Activity
IDH2 (R140Q)	IC50=100nM
IDH2 (R172K)	IC50=400nM

动物研究

剂量:
Mice: 5 mg/kg - 45 mg/kg[3] (p.o.)

给药途径:
p.o.

描述

Somatic point mutations in the active site of isocitrate dehydrogenase (IDH) 1 and 2 are found in multiple tumors. Enasidenib is a potent and selective inhibitor of the mutant IDH2. It inhibits the production of oncometabolite (R)-2-hydroxyglutarate (2HG) by the $IDH2^{R140Q}$ homodimer, the $IDH2^{R140Q/WT}$ heterodimer, and the $IDH2^{R172K/WT}$ heterodimer with IC50 values of 0.1, 0.03, and 0.01 μM, respectively. Enasidenib also displayed time-dependent potency for inhibiting the canonical forward (oxidative) reaction in the $IDH2^{WT}$ homodimer with an IC50 value of 1.8 μM. Moreover, Enasidenib inhibited 2HG production in HCT-116 KI ($IDH2^{R172K}$, TF-1 pLVX ($IDH2^{R140Q}$), TF-1 pLVX ($IDH2^{R172K}$), U87MG pLVX ($IDH2^{R172K}$), U87MG pLVX ($IDH2^{R140Q}$) cell lines with IC50 values of 0.53, 0.02, 0.98, 1.59, and 0.01 μM, respectively. In the presence of 0.1 μM enasidenib, $IDH2^{R140Q}$ cells exhibited an approximately 50% decrease in intracellular 2HG and an increase in the percentage of cells expressing cell surface markers associated with granulocytic differentiation. Incubation of $IDH2^{R140Q}$ blast cells with 5 μM enasidenib for 8 days significantly increased the number of cells with multilobed nuclei when compared with control cells. In tumor-bearing mice, two doses of 25 mg/kg enasidenib given 12h apart resulted in 99.2% inhibition of 2HG production in tumors. In a mouse xenograft model of primary human AML, administration of enasidenib (30 mg/kg, twice daily) for 38 days reduced serum and intracellular 2HG levels compared to vehicle-treated group[2].

储存

储存条件:

粉末	-20°C	3年
液体	-80°C	1年

运输条件:
Shipped in cold pack