产品名称：**Enasidenib**
产品别名：恩西地平

生物活性：

Description	Enasidenib is an oral, potent, reversible, selective inhibitor of the **IDH2** mutant enzymes, with **IC_{50}**s of 100 and 400 nM against $IDH2^{R140Q}$ and $IDH2^{R172K}$, respectively.
IC_{50} & Target	IC50: 100 nM (IDH2R140Q), 400 nM (IDH2R172K)[1]
In Vitro	Enasidenib (AG-221) reverses the effects of mutant IDH2 on DNA methylation in mutant stem/progenitor cells. Enasidenib induces differentiation and impairs self-renewal of IDH2-mutant leukemia cells, effects that are further enhanced by simultaneous inhibition of Flt3ITD. Enasidenib (AG-221) therapy induces differentiation of leukemic cells, with an increase in the CD11b+ population and a decrease in the c-Kit+ population in the peripheral blood at 2wks[2].
In Vivo	Treatment with Enasidenib (AG-221) significantly improves survival in an IDH2-mutant acute myeloid leukemia (AML) primary xenograft mouse model[1]. Enasidenib (AG-221), a mutant IDH2 inhibitor, remodels the epigenetic state of IDH2-mutant cells and induces alterations in self-renewal/differentiation in IDH2-mutant AML model in vivo. Enasidenib treatment (10mg/kg or 100mg/kg bid) leads to a reduction in 2-HG in vivo (96.7% below pre-treatment levels). Moreover, Enasidenib treatment restores megakaryocyte-erythroid progenitor (MEP) differentiation that is suppressed by mutant IDH2 expression (mean MEP% mean, 39% Veh vs 50% AG-221). Enasidenib therapy reverses the effects of mutant IDH2; a significant reduction is observed in DNA methylation, including 180 genes that have 20 or more hypomethylated differentially methylated cytosines (DMCs) following treatment. Enasidenib (100mg/kg bid) treatment of mice engrafted with Mx1-Cre IDH2R140QFlt3ITD AML cells markedly reduces 2-hydroxyglutarate (2-HG) levels consistent with on target inhibition. Enasidenib inhibits mutant IDH2-mediated 2-HG production[2].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 83.33 mg/mL (176.03 mM)** **H2O : < 0.1 mg/mL (insoluble)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1125 mL	10.5623 mL	21.1247 mL
5 mM	0.4225 mL	2.1125 mL	4.2249 mL
10 mM	0.2112 mL	1.0562 mL	2.1125 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

	1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.08 mg/mL (4.39 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (4.39 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。 2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: 2.08 mg/mL (4.39 mM); Suspended solution; Need ultrasonic and warming 此方案可获得 2.08 mg/mL (4.39 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.08 mg/mL (4.39 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (4.39 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀
References	[1]. Exploring the Pathway: IDH Mutations and Metabolic Dysregulation in Cancer Cells: A Novel Therapeutic Target. MAY 29, 2015 [2]. Alan H. Shih, et al. AG-221, a Small Molecule Mutant IDH2 Inhibitor, Remodels the Epigenetic State of IDH2-Mutant Cells and Induces Alterations in Self-Renewal/Differentiation in IDH2-Mutant AML Model in Vivo. Blood 2014 124:437.