产品名称：GSK503
产品别名：GSK503

生物活性：

Description	GSK503 is a potent and specific inhibitor of EZH2 methyltransferase with K_i^{app} values of 3 to 27 nM.
IC_{50} & Target	Ki: 3 to 27 nM (EZH2)[1]
In Vitro	GSK503 inhibits the methyltransferase activity of wild type and mutant EZH2 with similar potency (K_i^{app}=3-27 nM) and is structurally related to GSK126 and GSK343. GSK503 is >200 fold selective over EZH1 (K_i^{app}=636 nM) and >4000 fold selective over other histone methyltransferases[1].
In Vivo	In a melanoma mouse model, conditional EZH2 ablation as much as treatment with the GSK503 stabilizes the disease through inhibition of growth and virtually abolishes metastases formation without affecting normal melanocyte biology[2]. GSK503 displays favorable pharmacokinetics in mice. GSK503, but not vehicle, prevents the formation of germinal center after SRBC or NP-KLH immunization, phenocopying the Ezh2 null phenotype. GSK503 treatment leads to reduced numbers of GC B-cells by flow cytometry, reduces number and volume of GCs by immunohistochemistry, and impairs formation high affinity antibodies[1].

Solvent&Solubility

In Vitro:

DMSO : ≥ 44 mg/mL (83.54 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8987 mL	9.4936 mL	18.9872 mL
	5 mM	0.3797 mL	1.8987 mL	3.7974 mL
	10 mM	0.1899 mL	0.9494 mL	1.8987 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: ≥ 2.5 mg/mL (4.75 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (4.75 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 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: ≥ 2.5 mg/mL (4.75 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (4.75 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 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。
References	[1]. Béguelin W, et al. EZH2 is required for germinal center formation and somatic EZH2 mutations promote lymphoid transformation. Cancer Cell. 2013 May 13;23(5):677-92. [2]. Zingg D, et al. The epigenetic modifier EZH2 controls melanoma growth and metastasis through silencing of distinct tumour suppressors. Nat Commun. 2015 Jan 22;6:6051.

实验参考：

Animal Administration	Mice: To pharmacologically inhibit Ezh2 activity, Tyr::N-Ras^{Q61K} Ink4a$^{-/-}$ and C57Bl/6 mice are subjected to treatment with GSK503, which is diluted (15 mg/mL) in 20% Captisol solution. Efficient Ezh2 inhibition is achieved by daily intraperitoneal injections of 150 mg/kg GSK503 over 35 consecutive days. Mice are monitored during and after treatment to measure GSK503-induced reversible weight loss. C57Bl/6 and Foxn1nu/nu mice engrafted with melanoma cells are subjected to TM and GSK503 treatment as described above[2].
References	[1]. Béguelin W, et al. EZH2 is required for germinal center formation and somatic EZH2 mutations promote lymphoid transformation. Cancer Cell. 2013 May 13;23(5):677-92. [2]. Zingg D, et al. The epigenetic modifier EZH2 controls melanoma growth and metastasis through silencing of distinct tumour suppressors. Nat Commun. 2015 Jan 22;6:6051.