产品名称：GSK2801
产品别名：GSK2801

生物活性：

Description	GSK2801 is a potent, selective, orally active and cell active acetyl-lysine competitive BAZ2A and BAZ2B bromodomains inhibitor with Kd values of 136 nM and 257 nM, respectively. GSK2801shows >50-fold selectivity for BAZ2A/B over BRD4[1].
In Vitro	GSK2801 binds TAF1L(2) with an affinity KB of 0.31μM (KD: 3.2 μM) and a binding enthalpy change ΔH of −8.6 kcal/mol. ITC experiments using the bromodomain of BRD9 results in the determination of an affinity KB of 0.826 μM (KD: 1.1 μM) and ΔH of −9.8 kcal/mol[1]. GSK2801 or RNAi knockdown of BAZ2A/B with JQ1 selectively displaced BRD2 at promoters/enhancers of ETS-regulated genes. In 2D cultures, enhances displacement of BRD2 from chromatin by combination drug treatment induced senescence. In spheroid cultures, combination treatment induces cleaved caspase-3 and cleaved PARP characteristic of apoptosis in tumor cells. Thus, GSK2801 blocks BRD2-driven transcription in combination with BET inhibitor and induces apoptosis of TNBC[2].
In Vivo	In order to determine the suitability of GSK2801 for in vivo experiments, pharmacokinetic parameters after intraperitoneal and oral dosing to male CD1 mice is measured. GSK2801 has reasonable in vivo exposure after oral dosing, modest clearance, and reasonable plasma stability[1].

Solvent&Solubility

In Vitro:

DMSO : 50 mg/mL (**134.61 mM**; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6922 mL	13.4608 mL	26.9215 mL
	5 mM	0.5384 mL	2.6922 mL	5.3843 mL
	10 mM	0.2692 mL	1.3461 mL	2.6922 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 (6.73 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.73 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 (6.73 mM); Suspended solution; Need ultrasonic and warming

	此方案可获得 2.5 mg/mL (6.73 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 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。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: 2.5 mg/mL (6.73 mM); Clear solution; Need warming 此方案可获得 2.5 mg/mL (6.73 mM)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 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Chen P, et al. Discovery and Characterization of GSK2801, a Selective Chemical Probe for the Bromodomains BAZ2A and BAZ2B. J Med Chem. 2016 Feb 25;59(4):1410-24. [2]. Bevill SM, et al. GSK2801, a BAZ2/BRD9 Bromodomain Inhibitor, Synergizes with BET Inhibitors to Induce Apoptosis in Triple-Negative Breast Cancer. Mol Cancer Res. 2019 Jul;17(7):1503-1518.