

产品名称：**N-(5-Bromopyridin-2-yl)succinamic acid**
产品别名：**Bikinin**

生物活性:

Description	Bikinin is a non-steroidal, ATP-competitive inhibitor of plant GSK-3/Shaggy-like kinases and activates BR (brassinosteroids) signaling.				
IC ₅₀ & Target	GSK-3				
In Vitro	Bikinin reduces transcript levels of NbRBOHB and BR-induced NbRBOHB expression in TRV:00, TRV:NbDWARF, TRV:NbBRI1, TRV:NbBSK1, TRV:NbBAK1, TRV:NbBIK1 and TRV:NbBSU1 plants. Bikinin largely inhibits BR-increased ROS accumulation. Moreover, Bikinin decreases the transcripts of these six genes in all plants, but fails to down-regulate transcripts of these genes in NbBES1/BZR1-silenced plants. Bikinin also inhibits BR-induced up-regulation of the six genes, and the inhibition effects are compromised in NbBES1/BZR1-silenced plants[1]. Bikinin is a potent inhibitor of group I and group II ASKs[2]. Bikinin directly binds the GSK3 BIN2 and acts as an ATP competitor. Furthermore, bikinin inhibits the activity of six other Arabidopsis GSK3s[3].				
Solvent&Solubility	<i>In Vitro:</i> DMSO : ≥ 42 mg/mL (153.80 mM) * "≥" means soluble, but saturation unknown.				
		Solvent Mass Concentration	1 mg	5 mg	10 mg
	Preparing	1 mM	3.6619 mL	18.3097 mL	36.6193 mL
	Stock Solutions	5 mM	0.7324 mL	3.6619 mL	7.3239 mL
		10 mM	0.3662 mL	1.8310 mL	3.6619 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℃, 6 months; -20℃, 1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。				
	<i>In Vivo:</i> 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 (9.15 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.15 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% corn oil Solubility: ≥ 2.5 mg/mL (9.15 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.15 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 μ L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μ L 玉米油中，混合均匀。
References	[1]. Deng XG, et al. Role of brassinosteroid signaling in modulating Tobacco mosaic virus resistance in <i>Nicotiana benthamiana</i>. <i>Sci Rep.</i> 2016 Feb 3;6:20579. [2]. Rozhon W, et al. Bixin-like inhibitors targeting GSK3/Shaggy-like kinases: characterisation of novel compounds and elucidation of their catabolism in planta. <i>BMC Plant Biol.</i> 2014 Jun 19;14:172. [3]. De Rybel B, et al. Chemical inhibition of a subset of <i>Arabidopsis thaliana</i> GSK3-like kinases activates brassinosteroid signaling. <i>Chem Biol.</i> 2009 Jun 26;16(6):594-604.
实验参考：	
Kinase Assay	ASKs are expressed as GST-fusion proteins in <i>Escherichia coli</i> BL21. In vitro kinase assays are performed by incubating 50 ng GST-fusion protein, 10 μ g myelin basic protein (MBP) as a substrate and 0.15 MBq γ -[32P]-ATP as co-substrate at 25°C for 30 min. The reaction buffer consists of 20 mM HEPES/KOH pH 7.4, 15 mM MgCl ₂ , 5 mM EGTA, 1 mM dithiothreitol and 1 μ M cold ATP. The reaction products are separated by SDS-PAGE and the amount of radioactivity incorporated into MBP quantified using an Amersham storage phosphor imager screen and a Biorad Molecular Imager FX[2].
References	[1]. Deng XG, et al. Role of brassinosteroid signaling in modulating Tobacco mosaic virus resistance in <i>Nicotiana benthamiana</i>. <i>Sci Rep.</i> 2016 Feb 3;6:20579. [2]. Rozhon W, et al. Bixin-like inhibitors targeting GSK3/Shaggy-like kinases: characterisation of novel compounds and elucidation of their catabolism in planta. <i>BMC Plant Biol.</i> 2014 Jun 19;14:172. [3]. De Rybel B, et al. Chemical inhibition of a subset of <i>Arabidopsis thaliana</i> GSK3-like kinases activates brassinosteroid signaling. <i>Chem Biol.</i> 2009 Jun 26;16(6):594-604.

源叶生物