

产品名称：**BV6**
产品别名：**BV6**

生物活性:					
Description	BV6 is an antagonist of cIAP1 and XIAP, members of the inhibitors of apoptosis (IAP) family.				
IC ₅₀ & Target	IAP[1]				
In Vitro	<p>HCC193 has an IC₅₀ of 7.2 μM in MTS assays, while H460 cells are not reduced to 50% viability even with 30 μM BV6 treatment. Administration of 1 μM BV6 to HCC193 cells induces complete depletion of cIAP1 levels at 1 hour post-treatment, while a decrease in XIAP levels is not seen until 24 hours following addition of drug. Similarly, 5 μM BV6 fully depletes cIAP1 at 1 hour and begin to reduce XIAP at 24 hours in H460 cells. In parallel findings, cIAP1 levels are decreased in response to a small dose of 0.25 μM BV6 in both cell lines, whereas trace amounts of XIAP are still present at 5μM BV6. HCC193 cells demonstrates noticeable cleaved caspase-3 levels beginning 12 hours post-incubation with 1μM BV6, and cleaved caspase-3 levels continued to increase in a time-dependent manner over 48 hours. Treatment of HCC193 cells with 1 μM BV6 for 24 hours causes a significant survival curve shift in HCC193 cells relative to DMSO-treated cells, with a DER=1.38 (p<0.05)[1]. BV6 (2 and 5 μM) significantly represses BrdU incorporation in ectopic and eutopic (disease-free and myomas) ESCs. An ~30% decrease of BrdU incorporation is observed in both groups after treatment with 5 μM BV6[2].</p>				
In Vivo	<p>Murine cIAP-1, cIAP-2 and XIAP expressions are clearly observed in the cytoplasm of both epithelial and stromal cells of implants, whereas Survivin is mainly expressed in the nuclei BV6 treatment for 4 weeks attenuated the intensity of IAPs expression. The size of lesions range from ~2 to 7 mm in diameter. The monolayer epithelial cell lining of the cyst is shown. After immunohistochemical staining, cytokeratin and vimentin are positively stained, whereas calretinin is negative. After BV6 treatment for 4 weeks, the total number of lesions (4.6 versus 2.8/mouse), the average weight (78.1 versus 32.0 mg/mouse) and the surface area (44.5 versus 24.6 mm²/mouse) of lesions are significantly less than in the controls. In the endometrial gland epithelia or stroma, the percentage of Ki67-positive cells decreases after BV6 treatment[2].</p>				
Solvent&Solubility	<p>In Vitro:</p> <p>DMSO : ≥ 58 mg/mL (48.11 mM)</p> <p>* "≥" means soluble, but saturation unknown.</p>				
	<div>Preparing Stock Solutions</div>	<div>Solvent Mass Concentration</div>	1 mg	5 mg	10 mg
		1 mM	0.8295 mL	4.1474 mL	8.2948 mL
		5 mM	0.1659 mL	0.8295 mL	1.6590 mL
		10 mM	0.0829 mL	0.4147 mL	0.8295 mL
	<p>*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。</p> <p>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。</p> <p>In Vivo:</p> <p>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：</p> <p>——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</p>				

	<p>现沉淀、析出现象，可以通过加热和/或超声的方式助溶</p> <p>1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (2.07 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (2.07 mM, 饱和度未知) 的澄清溶液。</p> <p>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。</p> <p>2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.07 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (2.07 mM, 饱和度未知) 的澄清溶液。</p> <p>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。</p> <p>3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (2.07 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (2.07 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。</p> <p>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。</p>
References	<p>[1]. Li W, et al. BV6, an IAP antagonist, activates apoptosis and enhances radiosensitization of non-small cell lung carcinoma in vitro. J Thorac Oncol. 2011 Nov;6(11):1801-9.</p> <p>[2]. Uegaki T, et al. Inhibitor of apoptosis proteins (IAPs) may be effective therapeutic targets for treating endometriosis. Hum Reprod. 2015 Jan;30(1):149-58.</p>
实验参考：	
Cell Assay	<p>H460 and HCC193 cell lines are cultured in RPMI-1640 supplemented with 10% fetal bovine serum and 1% penicillin/streptomycin. Cell viability is measured using the CellTiter 96 Aqueous Non-Radioactive Cell Proliferation Assay kit. 5000 cells/well are seeded into 96-well plates in triplicate. Following adhesion of cells to the wells, increasing concentrations of BV6 are added into different wells. Control groups are exposed to the same concentration of DMSO. The final concentrations of 333 μg/mL MTS and 25 μM PMS are added to each well 24 hours later. After two hours incubation at 37°C in humidified 5% CO₂, plates are read at the absorbance of 490 nm on a microplate reader. Relative cell viability of an individual sample is calculated by normalizing their absorbance to that of the corresponding control. IC₅₀ values are calculated using Prism 5.01. For the TNFα neutralizing antibody assay, cells are exposed to 1 and 5 μM BV6 with or without 10 μg/mL Infliximab and the assay is performed 24 hours later. Plates are read at the absorbance of 490 nm on a microplate reader[1]</p>
Animal Administration	<p>Mice[2]</p> <p>Female mice (6 weeks of age, BALB/c) are used. All 24 mice are ovariectomized through a 1 cm longitudinal skin incision then injected s.c. with estradiol valerate (0.5 μg/mouse/week) once per week for 6 weeks until the experimental endometriosis induction. Two weeks after ovariectomy, the uteri of an additional eight donor mice (n=8) are removed en bloc after euthanasia and cleaned of excess tissue in sterile saline. Each uterus is cut to include the uterine horns in each half with a linear incision longitudinally and minced (0.5 mm in diameter) with dissecting scissors. The</p>

	<p>ovariectomized recipient mice (n=16) are anesthetized using pentobarbital sodium. A 0.5 cm subabdominal midline incision is made. Each recipient receives half of the donor uterus (1:2 donor uterus to host ratio) minced and added to 500 µl saline, and injected into the peritoneal cavity, and the peritoneum is sutured. Injected uterine tissue weighed ~50 mg per mouse. For the next 4 weeks, recipient mice are treated with a single i.p. injection of BV6 (n=8; 10 mg/kg) or vehicle (n=8; 1% DMSO) twice weekly.</p>
References	<p>[1]. <u>Li W, et al. BV6, an IAP antagonist, activates apoptosis and enhances radiosensitization of non-small cell lung carcinoma in vitro. J Thorac Oncol. 2011 Nov;6(11):1801-9.</u></p> <p>[2]. <u>Uegaki T, et al. Inhibitor of apoptosis proteins (IAPs) may be effective therapeutic targets for treating endometriosis. Hum Reprod. 2015 Jan;30(1):149-58.</u></p>



源叶生物