产品名称：**BAY 11-7085**
产品别名：**BAY 11-7085**

生物活性：

Description	BAY 11-7085 is an inhibitor of NF-κB activation and phosphorylation of IκBα; it stabilizes IκBα with an IC_{50} of 10 μM.	
IC_{50} & Target	NF-κB	IκB-α
		10 μM (IC_{50})
In Vitro	BAY 11-7085 inhibits TNFa-induced surface expression of E-selectin, VCAM-1, and ICAM-1with IC50 values in the range of 5-10 μM. BAY 11-7085 stabilizes IκBα in a dose-dependent manner with an IC50 value of approximately 10 μM. There is a clear correlation between the concentration of drug that stabilized IκBα, the concentration that inhibits nuclear levels of NF-kB, and the concentration that inhibits adhesion molecule expression[1]. BAY 11-7085 has been shown to inhibit cell proliferation and induce apoptosis of a variety of cells. BAY 11-7085 (ECSCs) significantly inhibits the cell proliferation and DNA synthesis of ovarian endometriotic cyst stromal cells and induces apoptosis and the G0/G1 phase cell cycle arrest of these cells. BAY 11-7085 induces apoptosis of ECSCs by suppressing antiapoptotic proteins, and that caspase-3-, -8-, and -9-mediated cascades are involved in this mechanism[2].	
In Vivo	BAY 11-7085 acts as an anti-inflammatory agent in both the rat carrageenan paw and the rat adjuvant arthritis model. It demonstrates a dose-dependent reduction in swelling in the rat carrageenan paw model[1].	

Solvent&Solubility

In Vitro:

DMSO： ≥ 26 mg/mL (104.28 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.0107 mL	20.0537 mL	40.1075 mL
	5 mM	0.8021 mL	4.0107 mL	8.0215 mL
	10 mM	0.4011 mL	2.0054 mL	4.0107 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→ 90% (20% SBE-β-CD in saline)

Solubility: ≥ 2.08 mg/mL (8.34 mM); Clear solution

此方案可获得 ≥ 2.08 mg/mL (8.34 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 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。

	2.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.08 mg/mL (8.34 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (8.34 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]. Pierce JW, et al. Novel inhibitors of cytokine-induced IkappaBalpha phosphorylation and endothelial cell adhesionmolecule expression show anti-inflammatory effects in vivo. J Biol Chem. 1997 Aug 22;272(34):21096-103. [2]. Nasu K, et al. Application of the nuclear factor-kappaB inhibitor BAY 11-7085 for the treatment of endometriosis: an in vitro study. Am J Physiol Endocrinol Metab. 2007 Jul;293(1):E16-23.

实验参考：

Cell Assay	ECSCs cells are incubated for 48 h with BAY 11-7085 (0.01-10 μM). Thereafter, 20 μL of WST-1 dye are added to each well, and the cells are further incubated for 4 h. All experiments are performed in the presence of 10% FBS. Cell proliferation is evaluated by measuring absorbance at 540 nm[2].
Animal Administration	Rats: 1% suspension of carrageenan in distilled water is administered to rats as 0.1 mL subplantar injection into the footpad of the right hind paw. One hour prior to injection, rats are treated intraperitoneally with vehicle (polyethylglycol 400 diluted 1:5 in 5% bovine serum albumin/water) or a fine suspension of compound 2 (1, 5, or 50 mg/kg) in vehicle. A positive control group is also included in which rats are pretreated with 20 mg/kg ibuprofen. Four hours after carrageenan administration, the volume of the injected paw is measured. Edema volumes are determined[1].
References	[1]. Pierce JW, et al. Novel inhibitors of cytokine-induced IkappaBalpha phosphorylation and endothelial cell adhesionmolecule expression show anti-inflammatory effects in vivo. J Biol Chem. 1997 Aug 22;272(34):21096-103. [2]. Nasu K, et al. Application of the nuclear factor-kappaB inhibitor BAY 11-7085 for the treatment of endometriosis: an in vitro study. Am J Physiol Endocrinol Metab. 2007 Jul;293(1):E16-23.