



上海源叶生物科技有限公司
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产品名称: ITE
产品别名: ITE

生物活性:					
Description	ITE is a potent endogenous agonist of aryl hydrocarbon receptor (AhR), binding directly to AHR, with a Ki of 3 nM. ITE also has immunosuppressive activity.				
IC ₅₀ & Target	Ki: 3 nM (AhR)[1]				
In Vitro	ITE is an endogenous agonist of AhR, binding directly to AHR, with a Ki of 3 nM[1]. ITE (0.03-30 mg/mL) decreases the antigen-specific T-cell proliferative responses[2]. ITE potently inhibits human pulmonary artery endothelial (HPAECs) growth at 10 and 20 μM, but shows no effect at 0.01-5 μM. ITE does not affect cell cycle progress of HPAECs at 10 and 20 μM, or induce expression of cleaved caspase-3 protein in HPAECs at 20 μM. In addition, ITE (20 μM) elevates CYP1A1 and CYP1B1 mRNA levels and decreases the levels of AhR protein in HPAECs[3].				
In Vivo	ITE (200 μg, i.p.) significantly suppresses the development of experimental autoimmune uveitis (EAU) in mice. ITE reduces the proportions of cells expressing IFN-γ, IL-17, or IL-10 in mice. ITE also suppresses the secretion of inflammatory cytokines by LN cells in mice[2].				
Solvent&Solubility	In Vitro: DMSO : ≥ 41 mg/mL (143.20 mM) H₂O : < 0.1 mg/mL (insoluble) * "≥" means soluble, but saturation unknown.				
	<div>Preparing Stock Solutions</div>	<div>Solvent / Mass / Concentration</div>	1 mg	5 mg	10 mg
		1 mM	3.4927 mL	17.4636 mL	34.9272 mL
		5 mM	0.6985 mL	3.4927 mL	6.9854 mL
		10 mM	0.3493 mL	1.7464 mL	3.4927 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。				
	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% corn oil Solubility: ≥ 2.67 mg/mL (9.33 mM); Clear solution 此方案可获得 ≥ 2.67 mg/mL (9.33 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 26.7 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。				
	[1]. Song J, et al. A ligand for the aryl hydrocarbon receptor isolated from lung. Proc Natl Acad Sci U S A.				



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References	<p>2002 Nov 12;99(23):14694-9.</p> <p>[2]. Nugent LF, et al. ITE, a novel endogenous nontoxic aryl hydrocarbon receptor ligand, efficiently suppresses EAU and T-cell-mediated immunity. Invest Ophthalmol Vis Sci. 2013 Nov 13;54(12):7463-9.</p> <p>[3]. Pang LP, et al. ITE inhibits growth of human pulmonary artery endothelial cells. Exp Lung Res. 2017 Oct;43(8):283-292.</p>
实验参考:	
Cell Assay	<p>Subconfluent cells (25, 000 cells/well) are seeded in 96-well plates. Cells are treated with ITE at 5, 10 and 20 μM or DMSO (0.1% v/v) in ECM for 2, 4 or 6 days with a change of ECM containing DMSO or ITE every other day (5 wells/treatment). At the end of treatment, cells are incubated with MTT reagent for 4 hr, and solubilized in crystal dissolving solution (100 μL/well) for 20 min. The absorbance is determined at 570 nm using the microplate reader[3].</p>
Animal Administration	<p>Mice[2]</p> <p>Eight- to 12-week-old female B10.A mice is used in the assay. Daily treatment starts on day 0 and consists of 200 μg of ITE suspended in 0.2 mL PBS, given intraperitoneally. Control mice are similarly treated with 0.2 mL of the vehicle, PBS containing 3.6% DMSO[2].</p>
References	<p>[1]. Song J, et al. A ligand for the aryl hydrocarbon receptor isolated from lung. Proc Natl Acad Sci U S A. 2002 Nov 12;99(23):14694-9.</p> <p>[2]. Nugent LF, et al. ITE, a novel endogenous nontoxic aryl hydrocarbon receptor ligand, efficiently suppresses EAU and T-cell-mediated immunity. Invest Ophthalmol Vis Sci. 2013 Nov 13;54(12):7463-9.</p> <p>[3]. Pang LP, et al. ITE inhibits growth of human pulmonary artery endothelial cells. Exp Lung Res. 2017 Oct;43(8):283-292.</p>

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