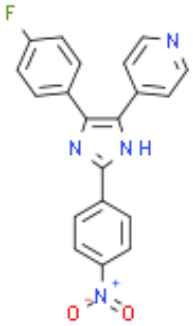
Product Data Sheet

Cas No.:	152121-53-4	Cat. No:	PC11771
Product Name:	PD 169316		
Product synonym:	4-[4-(4-氟苯基)-2-(4-硝基苯基)-1H-咪唑-5-基]吡啶;4-[4-(4-氟苯基)-2-(4-硝基苯基)-1H-咪唑-5-基]-吡啶;PD169316 抑制剂;4-(4-氟苯基)-2-(4-硝基苯基)-5-(4-吡啶基)-1H-咪唑		
Chemical name:	PD 169316		
MF:	C20H13N4O2F	FW:	360.34122
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax：	-	Formulation：	-
Solubility :			
SMILES :	FC(C=C1)=CC=C1C2=C(C3=CC=NC=C3)NC(C4=CC=C([N+]([O-])=O)C=C4)=N2		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

P38 MAPK抑制剂,PD 169316 是一种高效，细胞透过的，有选择性的 p38 MAP kinase 抑制剂，IC50 值为 89 nM。

生物活性	PD 169316 is a potent, cell-permeable and selective **p38 MAP kinase** inhibitor, with **IC_{50}** of 89 nM. PD169316 selectively inhibits the kinase activity of the phosphorylated p38 without hindering upstream kinases to phosphorylate p38. PD169316 shows antiviral activity against Enterovirus71. PD169316 shows antiviral activity against Enterovirus71.
IC50 & Target[1][2]	IC50: 89 nM (p38 MAPK)

体外研究(In Vitro)	PD169316 (10 μM) inhibits TGFβ and Activin A, but not BMP4 signaling in CaOV3 cells. PD169316 (0.2-20 μM) inhibits TGFβ-induced Smad2 nuclear translocation, Smad7 mRNA induction, and reporter gene activity in CaOV3 cells. PD169316 (10 μM) shows a significantly increased rate of proliferation in Nestin knockdown cells, and can rescue the effect of Nestin knockdown on cell viability in the absence of EGF. PD169316 significantly inhibits p38 MAP kinase activity with no significant change in ERK activity in PC12 cells. PD169316 (10 μM) blocks apoptosis induced by trophic factor withdrawal in differentiated PC12 cells.PD169316 (10 μM, 30 min) selectively inhibits the kinase activity of the phosphorylated p38 without hindering upstream kinases to phosphorylate p38. **Increased phospho p-38** levels in the presence of PD169316 are most likely due to blockade of **negative feedback loop** of dephosphorylation of p38 MAPK by MAPK phosphatases. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.** Western Blot Analysis Cell Line: Ishikawa PRB or PRA cells. Concentration: 10 μM. Incubation Time: 30 min. Result: Did not inhibit MEKK1-induced p38 phosphorylation.
体内研究(In Vivo)	PD169316 (1 mg/kg, intramuscular injection every day for 14 consecutive days) shows antiviral activity in a suckling mouse model. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.** Animal Model: EV71-challenged suckling mouse model (7-day-old Kunming mice). Dosage: 1 mg/kg. Administration: Intramuscular injection every day for 14 consecutive days. Result: Showed antiviral activity.
包装储存	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month

体外研究:

DMSO : 12.5 mg/mL (**34.69 mM;** Need ultrasonic)

配制储备溶液	溶剂体积 / 质量 / 浓度	1 mg	5 mg	10 mg
	1 mM	2.7752 mL	13.8758 mL	27.7516 mL
	5 mM	0.5550 mL	2.7752 mL	5.5503 mL
	10 mM	0.2775 mL	1.3876 mL	2.7752 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，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，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

溶解度数据	*体内研究:* 建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 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. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline Solubility: 1.25 mg/mL (3.47 mM); Suspended solution; Need ultrasonic 此方案可获得 1.25 mg/mL (3.47 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 12.5 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。 将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液 2. 建议依照次序添加每种溶剂： 10% DMSO 90% (20% SBE-β-CD in saline) Solubility: 1.25 mg/mL (3.47 mM); Suspended solution; Need ultrasonic 此方案可获得 1.25 mg/mL (3.47 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 12.5 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。 将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明 3. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil Solubility: ≥ 1.25 mg/mL (3.47 mM); Clear solution 此方案可获得 ≥ 1.25 mg/mL (3.47 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 12.5 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。 *