

产品名称: **PD184352 (CI-1040)**

产品别名: **CI-1040**

生物活性:

Description	CI-1040 (PD184352) is an orally active, highly specific, small-molecule inhibitor of MEK with an IC ₅₀ of 17 nM for MEK1.				
IC ₅₀ & Target	MEK1				
	17 nM (IC ₅₀)				
In Vitro	CI-1040 directly inhibits MEK1 with an IC50 of 17 nM. It has also been shown to have little activity against a panel of related kinases with IC50 values more than 2.5 orders of magnitude higher. Treatment of whole cells with CI-1040 completely inhibits the mitogen-stimulated phosphorylation of ERK. CI-1040 at a concentration of 1 μM is found to inhibit phosphorylation of ERK1 and ERK2 by 99% and 92%, respectively in MDA-MB-231 breast cancer cells[1]. CI-1040 induces apoptosis and inhibits proliferation in U-937 cells in a dose and time-dependent manner. CI-1040 induces a significant increase in PUMA mRNA and protein levels[2].				
In Vivo	The systemic administration of the MEK inhibitor CI-1040 reduces adenoma formation to a third and significantly restores lung structure. The proliferation rate of lung cells of mice treated with CL-1040 is decreased without any obvious effects on differentiation of pneumocytes[3].				
Solvent&Solubility	<i>In Vitro:</i> DMSO : ≥ 150 mg/mL (313.37 mM) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
		1 mM	2.0892 mL	10.4458 mL	20.8917 mL
		5 mM	0.4178 mL	2.0892 mL	4.1783 mL
		10 mM	0.2089 mL	1.0446 mL	2.0892 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。				
References	[1]. Allen LF, et al. CI-1040 (PD184352), a targeted signal transduction inhibitor of MEK (MAPKK). <u>Semin Oncol.</u> 2003 Oct;30(5 Suppl 16):105-16. [2]. Wei CR, et al. MEK inhibitor CI-1040 induces apoptosis in acute myeloid leukemia cells in vitro. <u>Eur Rev Med Pharmacol Sci.</u> 2016 May;20(10):1961-8. [3]. Kramer BW, et al. Use of mitogenic cascade blockers for treatment of C-Raf induced lung adenoma in vivo: CI-1040strongly reduces growth and improves lung structure. <u>BMC Cancer.</u> 2004 Jun 1;4:24.				
	实验参考:				
	Cell Assay	The MEK inhibitor CI-1040 is dissolved in DMSO as 10 mM stock solutions and used in cell culture at final concentration 50 mg/mL. U-937 cells are pretreated for 24 hrs with 5 and 20 uM CI- 1040, then transfected with wt-p53 siRNA or PUMA siRNA for 48 hrs. Then 20 mL of MTT solution are added to each well and incubated further for 2 hours. Upon termination, the supernatant is aspirated and the MTT formazan formed by metabolically viable cells is dissolved in 100 mL of isopropanol.			

	The plates are mixed for 30 minutes on a gyratory shaker, and absorbance is measured at 595 nm using a plate reader[2].
Animal Administration	Mice: The lung cancer mouse model is generated by targeting constitutively active C-Raf kinase to the lung. BAY 43-9006 or CI-1040 is daily intraperitoneal injected at a dose of 100 mg/kg from 4 months of age over a period of 21 days. Lungs were isolated and analyzed at the end of the treatment period[3].
References	[1]. Allen LF, et al. CI-1040 (PD184352), a targeted signal transduction inhibitor of MEK (MAPKK). <u>Semin Oncol.</u> 2003 Oct;30(5 Suppl 16):105-16. [2]. Wei CR, et al. MEK inhibitor CI-1040 induces apoptosis in acute myeloid leukemia cells in vitro. <u>Eur Rev Med Pharmacol Sci.</u> 2016 May;20(10):1961-8. [3]. Kramer BW, et al. Use of mitogenic cascade blockers for treatment of C-Raf induced lung adenoma in vivo: CI-1040 strongly reduces growth and improves lung structure. <u>BMC Cancer.</u> 2004 Jun 1;4:24.



源叶生物