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产品名称: **CP-724714**
产品别名: **CP-724714**

生物活性:				
Description	CP-724714 is a potent, selective inhibitor of HER2/ErbB2 with IC50 of 10 nM, >640-fold selectivity against EGFR, InsR, IRG-1R, PDGFR, VEGFR2, Abl, Src, c-Met etc. Phase 2. IC50 value: 10 nM [1] Target: HER2/ErbB2 in vitro: CP-724714 is marked selectively against EGFR with IC50 of 6.4 μM. CP-724714 is >1,000-fold less potent for IR, IGF-1R, PDGFRβ, VGFR2, abl. Src, c-Met c-jun NH2-terminal kinase (JNK)-2, JNK-3, ZAP-70, cyclin-dependent kinase (CDK)-2, and CDK-5. CP-724714 potently reduces the EGF-induced autophosphorylation of the chimera containing the erbB2 kinase domain with IC50 of 32 nM, but is markedly less potent against EGFR in transfected NIH3T3 cells. CP-724714 sensitively inhibits the proliferation of erbB2-amplified cells including BT-474 and SKBR3, with IC50 of 0.25 and 0.95 μM. CP-724714 induces the accumulation of cells in G1 phase and a marked reduction in S-phase in BT-474 cells at 1 μM [1]. CP-724714 likely exerts its hepatotoxicity via both hepatocellular injury and hepatobiliary cholestatic mechanisms. CP-724714 displays inhibition of cholyl-lysyl fluorescein and taurocholate (TC) efflux into canaliculi in cryopreserved and fresh cultured human hepatocytes, respectively. CP-724714 inhibits TC transport in membrane vesicles expressing human bile salt export pump with IC50 of 16 μM and inhibits the major efflux transporter in bile canaliculi, MDR1, with IC50 of ~28 μM [2]. in vivo: CP-724714 (25 mg/kg) is rapidly absorbed after p.o. administration and causes reduction of tumor erbB2 receptor phosphorylation after dosing in FRE-erbB2 or BT-474 xenografts. CP-724714 induces apoptosis in FRE-erbB2 xenograft-bearing (s.c.) mice and shows 50% tumor growth inhibition at 50 mg/kg, without weight loss or mortality. CP-724714 also has great antitumor activity in MDA-MB-453, MDA-MB-231, LoVo (colon), and Colo-205 (colon) xenografts. Furthermore, CP-724714 (30 or 100 mg/kg) reduces the extracellular signal-regulated kinase and Akt phosphorylation in BT-474 xenografts [1].			
	ErbB2			
IC ₅₀ & Target	10 nM (IC ₅₀)			
Preparing Stock Solutions	In Vitro: DMSO : ≥ 50 mg/mL (106.49 mM) * "≥" means soluble, but saturation unknown.			
	Solvent	Mass	1 mg	5 mg
	Concentration			
	1 mM	2.1297 mL	10.6487 mL	21.2974 mL
	5 mM	0.4259 mL	2.1297 mL	4.2595 mL
	10 mM	0.2130 mL	1.0649 mL	2.1297 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;				



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Solvent&Solubility	——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→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (5.32 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.32 mM，饱和度未知) 的澄清溶液。 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。 2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.32 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.32 mM，饱和度未知) 的澄清溶液。 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。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (5.32 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.32 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 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Jani JP, et al. Discovery and pharmacologic characterization of CP-724,714, a selective ErbB2 tyrosine kinase inhibitor. Cancer Res, 2007, 67(20), 9887-9893. [2]. Feng B, et al. Role of hepatic transporters in the disposition and hepatotoxicity of a HER2 tyrosine kinase inhibitor CP-724,714. Toxicol Sci, 2009, 108(2), 492-500.

源叶生物