产品名称：SSR128129E
产品别名：SSR

生物活性：

Description	SSR128129E is an orally available and allosteric FGFR inhibitor with an IC_{50} of 1.9 μM for FGFR1.			
IC_{50} & Target [1]	FGFR1	FGFR2	FGFR3	FGFR4
	1.9 μM (IC_{50})			
In Vitro	SSR128129E inhibits FGF2-induced EC proliferation with an IC50 of 31±1.6 nM, migration with an IC50 of 15.2±4.5 nM, and lamellipodia formation in a dose dependent manner. SSR128129E inhibits responses mediated by FGFR1-4. For instance, SSR128129E blocks EC migration in response to FGF1, a ligand of FGFR1 and FGFR4, and capillary tube formation in response to FGF19, a ligand of FGFR4. Proliferation and migration of the murine pancreatic Panc02 tumor cell line in response to FGF7 are also blocked by SSR128129E, showing that SSR128129E inhibits FGFR subtypes of other species as well. SSR128129E blocks different FGFR subtypes in various cell lines with nanomolar potency[1].			
In Vivo	Oral delivery of SSR128129E (30 mg/kg/day, from day 3) inhibits growth of orthotopic Panc02 tumors by 44% and delays growth of Lewis lung carcinoma. oral SSR128129E (30 mg/kg/day, from day 5) reduces tumor size and weight by 53% and 40%, respectively. SSR128129E inhibits the growth of subcutaneous CT26 colon tumors by 34% and of the multidrug resistant MCF7/ADR breast cancer xenograft model by 40%. SSR128129E reduces tumor invasiveness and metastasis of Panc02 tumor cells to peritoneal lymph nodes[1].			

Solvent&Solubility

In Vitro:

DMSO： ≥ 54 mg/mL (155.93 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8876 mL	14.4379 mL	28.8759 mL
	5 mM	0.5775 mL	2.8876 mL	5.7752 mL
	10 mM	0.2888 mL	1.4438 mL	2.8876 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→40% PEG300 →5% Tween-80 → 45% saline

Solubility: ≥ 2.5 mg/mL (7.22 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (7.22 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 (7.22 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.22 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。
References	[1]. Bono F, et al. Inhibition of tumor angiogenesis and growth by a small-molecule multi-FGF receptor blocker with allosteric properties. Cancer Cell. 2013 Apr 15;23(4):477-88.

实验参考：

Cell Assay	HUVECs, freshly isolated from different donors and used between passage two and five, are cultured in M199 medium supplemented with 20% fetal bovine serum (FBS), 2 mM L-glutamine, 30 mg/L endothelial cell growth factor supplements (EGCS), 10 units/mL heparin, and penicillin/streptomycin. For proliferation, ECs are starved overnight in growth factor-depleted M199 medium containing 2% FBS and stimulated for 24 hr with 10 ng/mL bFGF with SSR128129E or DMSO. Proliferation is assessed the last 2 hr by incubation with 1 μCi/mL [^{3}H]thymidine[1]
Animal Administration	Mice: Anesthetized BALB/c mice are inoculated with murine 4T1 mammary carcinoma cells. After randomization of tumor bearing mice for tumor size on day 5 after tumor cell inoculation, SSR128129E or vehicle (0.6 % methylcellulose) is administered daily via oral gavage at a dose of 30 mg/kg until the end of the experiment at day 21. Tumor volume is measured. At the end of the experiment, mice are sacrificed by pentobarbital injection, and lungs and tumors are dissected. Visible metastatic nodules on the lungs are counted by using a dissecting microscope[1].
References	[1]. Bono F, et al. Inhibition of tumor angiogenesis and growth by a small-molecule multi-FGF receptor blocker with allosteric properties. Cancer Cell. 2013 Apr 15;23(4):477-88.