上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话：021-61312973　　传真：021-55068248
网址：www.shyuanye.com
邮箱：shyysw@sina.com

产品名称：Sitravatinib
产品别名：MGCD516; MG-516

生物活性：

Description

Sitravatinib (MGCD516) is an orally bioavailable receptor tyrosine kinase (RTK) inhibitor with IC50s of 1.5 nM, 2 nM, 2 nM, 5 nM, 6 nM, 6 nM, 8 nM, 0.5 nM, 29 nM, 5 nM, and 9 nM for Axl, MER, VEGFR3, VEGFR2, VEGFR1, KIT, FLT3, DDR2, DDR1, TRKA, TRKB, respectively[1]. Sitravatinib shows potent single-agent antitumor efficacy and enhances the activity of PD-1 blockade through promoting an antitumor immune microenvironment[2].

IC_{50} & Target

Axl	MER	VEGFR3	VEGFR2	VEGFR1	TrkA
1.5 nM (IC_{50})	2 nM (IC_{50})	2 nM (IC_{50})	5 nM (IC_{50})	6 nM (IC_{50})	5 nM (IC_{50})
TrkB	KIT	FLT3	DDR2	DDR1	
9 nM (IC_{50})	6 nM (IC_{50})	8 nM (IC_{50})	0.5 nM (IC_{50})	29 nM (IC_{50})	

In Vitro

Sitravatinib (0.01 nM-10 μM; 14 days) reduces colony formation in a dose-dependent manner in KLN205 and E0771 cell lines[2].

Sitravatinib (0.001-10 μM; 5 days) inhibits tumor cell viability with IC50s of approximately 1 μM in KLN205, E0771 and CT1B-A5 cell lines[2].

Cell Viability Assay[2]

Cell Line:	KLN205, E0771, CT1B-A5 cells
Concentration:	0.001, 0.01, 0.1, 1, 10 μM
Incubation Time:	5 days
Result:	Inhibited KLN205, E0771, CT1B-A5 cells with IC_{50}s of approximately 1 μM.

In Vivo

Sitravatinib (20 mg/kg; p.o.; once per day for 6 days) significantly inhibits tumor progression and induces tumor regression in C57BL/6 mice bearing CT1B-A5 cells model[2].

Animal Model:	6-week-old C57BL/6 mice (bearing CT1B-A5 cells) [2]
Dosage:	20 mg/kg
Administration:	Oral administration; once per day for 6 days
Result:	Significantly inhibited tumor progression and induced tumor regression.

In Vitro:

DMSO : ≥ 32 mg/mL (50.82 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5881 mL	7.9405 mL	15.8811 mL
5 mM	0.3176 mL	1.5881 mL	3.1762 mL
10 mM	0.1588 mL	0.7941 mL	1.5881 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

Solvent&Solubility	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 (3.97 mM); Suspended solution; Need ultrasonic 此方案可获得 2.5 mg/mL (3.97 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 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 (3.97 mM); Suspended solution; Need ultrasonic 此方案可获得 2.5 mg/mL (3.97 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 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 (3.97 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (3.97 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]. Patwardhan PP et al. Significant blockade of multiple receptor tyrosine kinases by MGCD516 (Sitravatinib), a novel small molecule inhibitor, shows potent anti-tumor activity in preclinical models of sarcoma. Oncotarget, 2016 Jan 26;7(4):4093-109. [2]. Du W, et al. Sitravatinib potentiates immune checkpoint blockade in refractory cancer models. JCI Insight. 2018 Nov 2;3(21). pii: 124184.