上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
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产品名称：Y06036
CAS 号：1832671-96-1
产品货号：S87865

生物活性：

Description	Y06036 是一种有效的选择性 BET 抑制剂，可与 BRD4(1) 溴结构域结合，Kd 值为 82 nM。具有抗肿瘤活性。
IC50 & Target[1]	BRD4(1) 82 nM (Kd)

Cellular Effect

Cell Line	Type	Value	Description
A549	IC_{50}	> 5 μM	Antiproliferative activity against human A549 cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
CWR22R	IC_{50}	1.5 μM	Antiproliferative activity against AR-positive human 22Rv1 cells assessed as reduction in cell viability incubated for 96 hrs by cell-titer glo assay
DU-145	IC_{50}	> 6 μM	Antiproliferative activity against AR-negative human DU-145 cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
HeLa	IC_{50}	> 5 μM	Antiproliferative activity against human HeLa cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
HFL1	IC_{50}	18.2 μM	Cytotoxicity against human HFL1 cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
Hs-578T	IC_{50}	1 μM	Antiproliferative activity against human Hs-578T cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
HT-29	IC_{50}	0.4 μM	Antiproliferative activity against human HT-29 cells assessed as reduction in cell viability incubated for 120 hrs by cell-titer glo assay
LNCaP	IC_{50}	1.06 μM	Antiproliferative activity against AR-positive human LNCAP cells assessed as reduction in cell viability incubated for 96 hrs by cell-titer glo assay
LNCaP C4-2B	IC_{50}	2.62 μM	Antiproliferative activity against AR-positive human C4-2B cells assessed as reduction in cell viability incubated for 96 hrs by cell-titer glo assay
MCF7	IC_{50}	1 μM	Antiproliferative activity against human MCF-7 cells assessed as reduction in cell viability incubated for 96 hrs by cell-titer glo assay
MV4-11	IC_{50}	0.4 μM	Antiproliferative activity against human MV4-11 cells assessed as reduction in cell viability incubated for 120 hrs by cell-titer glo assay
NCI-H1975	IC_{50}	2.5 μM	Antiproliferative activity against human NCI-H1975 cells

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				assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
	PC-3	IC_{50}	> 3 μM	Antiproliferative activity against AR-negative human PC-3 cells assessed as reduction in cell viability incubated for 96 hrs by cell-titer glo assay
	U2OS	IC_{50}	> 5 μM	Antiproliferative activity against human U2OS cells assessed as reduction in cell viability incubated for 72 hrs by cell-titer glo assay
	VCaP	IC_{50}	0.63 μM	Antiproliferative activity against AR-positive human VCaP cells assessed as reduction in cell viability incubated for 144 hrs by cell-titer glo assay

In Vitro

Y06036 (0.001-100 nM, 96 hours for LNCaP, C4-2B, and 22Rv1 cells; 144 hours for VCaP cells) exhibits low micromolar or nanomolar potencies (IC50: 0.29-2.6 μM) in the four androgen receptor (AR)-positive prostate cancer cell lines LNCaP, C4-2B, 22Rv1, and VCaP. Treatment of 22Rv1 cells with Y06036 (1, 2, 4, 8, and 16 μM, 48 hours) results in significant down-regulation of both full-length (AR-fl) and AR variants levels[1]。

Cell Viability Assay[1]

Cell Line:	LNCaP, C4-2B, 22Rv1, and VCaP prostate cancer cells
Concentration:	0.001-100 μM
Incubation Time:	96 hours for LNCaP, C4-2B, and 22Rv1; 144 hours for VCaP
Result:	Inhibited LNCaP, C4-2B, 22Rv1, and VCaP cells with IC50s of 1.06, 2.62, 1.50, 0.63 μM, respectively.

Western Blot Analysis[1]

Cell Line:	22Rv1 cells
Concentration:	1,2,4,8, and 16 μM
Incubation Time:	48 hours
Result:	Resulted in significant down-regulation of both AR-fl and AR variants levels

In Vivo

Y06036 (50 mg/kg, i.p. injection, 5 times per week, 25 days) demonstrates therapeutic effects in a C4-2B CRPC xenograft tumor model in mice. Y06036 is well tolerated in the treated mice, based on the weight of the animal body and their general behavior[1].

Animal Model:	Four-week-old male mice (strain: C.B-17/IcrHsd-Prkdcscid for C4-2B) with C4-2B mouse xenograft model[1]
Dosage:	50 mg/kg, 100 μL
Administration:	Intraperitoneal (i.p.) injection, 5 times per week, 25 days
Result:	Exhibited strong antitumor activities during the 25-day treatment period, with a tumor growth inhibition (TGI) of 70%.

Solvent&Solubility

细胞实验:

DMSO 中的溶解度 ：130 mg/mL (304.26 mM; 超声助溶; 吸湿的 DMSO 对产品的溶解度有显著影响，请使用新开封的 DMSO)

	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
Preparing	1 mM	2.3404 mL	11.7022 mL	23.4044 mL

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	Stock Solutions	5 mM	0.4681 mL	2.3404 mL	4.6809 mL
		10 mM	0.2340 mL	1.1702 mL	2.3404 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, 2 years; -20°C, 1 year。-80°C 储存时，请在 2 年内使用， -20°C 储存时，请在 1 年内使用。

动物实验：

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

方案 一

请依序添加每种溶剂： 10% DMSO → 40% PEG300 → 5% Tween-80 → 45% Saline

Solubility: ≥ 2.17 mg/mL (5.08 mM); 澄清溶液

此方案可获得 ≥ 2.17 mg/mL（饱和度未知）的澄清溶液。

以 1 mL 工作液为例，取 100 μL 21.7 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；再向上述体系中加入 50 μL Tween-80，混合均匀；然后再继续加入 450 μL 生理盐水 定容至 1 mL。

生理盐水的配制：将 0.9 g 氯化钠，溶解于 ddH_2O 并定容至 100 mL，可以得到澄清透明的生理盐水溶液。

方案 二

请依序添加每种溶剂： 10% DMSO → 90% Corn Oil

Solubility: ≥ 2.17 mg/mL (5.08 mM); 澄清溶液

此方案可获得 ≥ 2.17 mg/mL（饱和度未知）的澄清溶液，此方案实验周期在半个月以上的动物实验酌情使用。

以 1 mL 工作液为例，取 100 μL 21.7 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。

参考文献

[1]. Zhang M, et al. Structure-Based Discovery and Optimization of Benzo[d]isoxazole Derivatives as Potent and Selective BET Inhibitors for Potential Treatment of Castration-Resistant Prostate Cancer (CRPC). J Med Chem. 2018 Apr 12;61(7):3037-3058.

完整储备液配制表：

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, 2 years; -20° C, 1 year。-80° C 储存时，请在 2 年内使用， -20° C 储存时，请在 1 年内使用。

可选溶剂	**质量 / 溶剂体积 / 浓度**	**1 mg**	**5 mg**	**10 mg**	**25 mg**
DMSO	**1 mM**	2.3404 mL	11.7022 mL	23.4044 mL	58.5110 mL
	5 mM	0.4681 mL	2.3404 mL	4.6809 mL	11.7022 mL

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	10 mM	0.2340 mL	1.1702 mL	2.3404 mL	5.8511 mL
	15 mM	0.1560 mL	0.7801 mL	1.5603 mL	3.9007 mL
	20 mM	0.1170 mL	0.5851 mL	1.1702 mL	2.9256 mL
	25 mM	0.0936 mL	0.4681 mL	0.9362 mL	2.3404 mL
	30 mM	0.0780 mL	0.3901 mL	0.7801 mL	1.9504 mL
	40 mM	0.0585 mL	0.2926 mL	0.5851 mL	1.4628 mL
	50 mM	0.0468 mL	0.2340 mL	0.4681 mL	1.1702 mL
	60 mM	0.0390 mL	0.1950 mL	0.3901 mL	0.9752 mL
	80 mM	0.0293 mL	0.1463 mL	0.2926 mL	0.7314 mL
	100 mM	0.0234 mL	0.1170 mL	0.2340 mL	0.5851 mL