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：Icotinib
产品别名：埃克替尼；BPI-2009

生物活性：

Description	Icotinib (BPI-2009) is a potent and specific EGFR inhibitor with an IC_{50} of 5 nM; also inhibits mutant $EGFR^{L858R}$, $EGFR^{L858R/T790M}$, $EGFR^{T790M}$ and $EGFR^{L861Q}$.

IC_{50} & Target	EGFR	$EGFR^{L858R}$	$EGFR^{L858R/T790M}$	$EGFR^{T790M}$	$EGFR^{L861Q}$
	5 nM (IC_{50})				

In Vitro	Incubation with Iconitib at 0.5 μM results in kinase activity inhibition of 91%, 99%, 96%, 61% and 61%, respectively. Iconitib inhibits the proliferation of A431 and BGC-823 A549, H460 and KB cell lines with IC50s of 1, 4.06, 12.16, 16.08, 40.71 μM. When profiled with 88 kinases, Icotinib only shows meaningful inhibitory activity to EGFR and its mutants. Icotinib blocks EGFR-mediated intracellular tyrosine phosphorylation (IC50=45 nM) in the human epidermoid carcinoma A431 cell line and inhibits tumor cell proliferation[1].
In Vivo	Icotinib exhibits potent dose-dependent antitumor effects in nude mice carrying a variety of human tumor-derived xenografts. The drug is well tolerated at doses up to 120 mg/kg/day in mice without mortality or significant body weight loss during the treatment. Icotinib inhibits tumor growth at a rate of 25.2%, 45.6% and 51.5% in the A431 cell line groups; 3.4%, 25.9% and 31.0% in the A549 cell line groups; 49.4%, 52.6% and 67.4% in the H460 cell line groups, and 30.3%, 36.4% and 46.5% in the HCT8 cell line groups, at 30, 60 and 120 mg/kg/dose, respectively[1].

Solvent&Solubility

In Vitro:

DMSO : ≥ 155 mg/mL (395.99 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5548 mL	12.7740 mL	25.5480 mL
	5 mM	0.5110 mL	2.5548 mL	5.1096 mL
	10 mM	0.2555 mL	1.2774 mL	2.5548 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 (6.39 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.39 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% corn oil Solubility: ≥ 2.5 mg/mL (6.39 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.39 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]. Tan F, et al. Icotinib (BPI-2009H), a novel EGFR tyrosine kinase inhibitor, displays potent efficacy in preclinical studies. Lung Cancer. 2012 May;76(2):177-82.

实验参考：

Cell Assay	Cells (1000/well) are seeded into 96-well plates in RPMI-1640 medium containing 10% FBS and grown in a 5% CO2 incubator at 37°C. After 24 h, cells are treated with Icotinib at 0, 0.78, 1.56, 3.125, 6.25, 12.5 or 25 μM for 96 h. Cell proliferation is calculated by subtracting the mean absorbance value on day 0 from the mean absorbance value on day 4[1].
Animal Administration	Mice: The effect of three doses of Icotinib (30, 60, and 120 mg/kg/dose p.o. qd) on antitumor activity and survival is determined in mice bearing A431, A549, H460 and HCT8 tumor xenografts. Taxol (30 mg/kg/dose i.p. once a week) is employed in these experiments as a positive control group[1].
Kinase Assay	In the in vitro kinase assays, 2.4 ng/μL EGFR protein is mixed with 32 ng/μL Crk in 25 μL kinase reaction buffer containing 1 μM cold ATP and 1 μCi ^{32}P-γ-ATP. The mix is incubated with Icotinib at 0, 0.5, 2.5, 12.5 or 62.5 nM on ice for 10 min followed by incubation at 30°C for 20 min. After quenching with SDS sample buffer at 100°C for 4 min, the protein mix is resolved by electrophoresis in a 10% SDS-PAGE gel. The dried gel is then exposed to detect radioactivity. Quantification is performed by software[1].
References	[1]. Tan F, et al. Icotinib (BPI-2009H), a novel EGFR tyrosine kinase inhibitor, displays potent efficacy in preclinical studies. Lung Cancer. 2012 May;76(2):177-82.