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产品名称：Dovitinib Lactate
产品别名：多韦替尼乳酸盐 ；CHIR-258 lactate; TKI-258 lactate

生物活性：

Description	Dovitinib(CHIR-258; TKI258) lactate is a potent inhibitor of fibroblast growth factor receptor 3 (FGFR3) with an IC_{50} of 5 nM.
IC_{50} & Target	FGFR3
	5 nM (IC_{50})
In Vitro	Dovitinib potently inhibits FGFR3 with an IC50 of 5 nM in in vitro kinase assays and selectively inhibits the growth of B9 cells and human myeloma cell lines expressing wild-type or activated mutant FGFR3. Addition of interleukin 6 (IL-6) or insulin growth factor 1 or coculture on stroma does not confer resistance to dovitinib. In primary myeloma cells dovitinib inhibits downstream extracellular signal-regulated kinase (ERK) 1/2 phosphorylation with an associated cytotoxic response[1]. Treatment of SK-HEP1 cells with dovitinib results in G2/M cell cycle arrest, inhibition of colony formation in soft agar and blockade of bFGF-induced cell migration. Dovitinib inhibits basal expression and FGF-induced phosphorylation of FGFR-1, FRS2-α and ERK1/2[2].
In Vivo	Dovitinib demonstrates significant antitumor and antimetastatic activities in HCC xenograft models. Dovitinib potently inhibits tumor growth of six HCC lines. Inhibition of angiogenesis correlates with inactivation of FGFR/PDGFR-β/VEGFR-2 signaling pathways. Dovitinib also causes dephosphorylation of retinoblastoma, upregulation of p-histone H2A-X and p27, and downregulation of p-cdk-2 and cyclin B1, which results in a reduction in cellular proliferation and the induction of tumor cell apoptosis[2].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 30 mg/mL (62.17 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0725 mL	10.3625 mL	20.7250 mL
	5 mM	0.4145 mL	2.0725 mL	4.1450 mL
	10 mM	0.2072 mL	1.0362 mL	2.0725 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。

References	[1]. Trudel S, et al. CHIR-258, a novel, multitargeted tyrosine kinase inhibitor for the potential treatment of t(4;14) multiple myeloma. Blood. 2005, 105(7), 2941-2948. [2]. Huynh H, et al. Dovitinib demonstrates antitumor and antimetastatic activities in xenograft models of hepatocellular carcinoma. J Hepatol. 2012, 56(3), 595-601.

实验参考：

Cell Assay	To determine IC_{50} for SK-HEP1 cells, cells are plated at a density of 2×10^4 cells per dish. After 48 h, cells are treated with 0, 0.01, 0.1, 1, 5, 10, 50, 100 μM dovitinib in DMEM containing 1% FBS for 24

	h. Cell viability is determined with Cell Proliferation Assay. IC_{50} is calculated by nonlinear regression analysis using GraphPad Prism software[2].
Animal Administration	Mice: Six HCC lines (06-0606, 26-0808A, 26-1004, 25-0705A, 5-1318, 21-0208) are used to establish tumors in male SCID mice. or dose-esponse experiments, mice bearing the 06-0606 xenografts re orally given vehicle (5% dextrose) or two doses of dovitinib (50 and 75 mg/kg) daily for 14 days. For time-dependent inhibition of dovitinib targets, mice bearing 06-0606 tumors are given orally 200 μL of either vehicle (n=6) or 50 mg/kg/day of dovitinib (n=10)[2].
References	[1]. Trudel S, et al. CHIR-258, a novel, multitargeted tyrosine kinase inhibitor for the potential treatment of t(4;14) multiple myeloma. Blood. 2005, 105(7), 2941-2948. [2]. Huynh H, et al. Dovitinib demonstrates antitumor and antimetastatic activities in xenograft models of hepatocellular carcinoma. J Hepatol. 2012, 56(3), 595-601.