产品名称：Droxinostat
产品别名：NS 41080

生物活性：

Description

Droxinostat(NS41080) is a selective inhibitor of HDAC3, HDAC6, and HDAC8 with IC50 of 16.9, 2.47 and 1.46 μM, respectively; > 8-fold selective against HDAC3 and no inhibition to HDAC1, 2, 4, 5, 7, 9, and 10. IC50 Value: 16.9 μM(HDAC3); 2.47 μM(HDAC6); 1.46 μM(HDAC8) Target: HDAC3/6/8 in vitro: Droxinostat is originally identified as a sensitizer of PPC-1 cells to FAS and TRAIL by downregulating the expression of c-Fas-associated death domain-like interleukin-1-converting enzyme-like inhibitory protein (c-FLIP). the direct targets of Droxinostat remains enigma until recently. It is revealed that in histone deacetylases (HDAC) isoform 1-10, Droxinostat selective inhibits HDAC3, 6, and 8, with IC50 values of 16.9 μM, 2.47 μM, and 1.46 μM, respectively, without inhibiting other HDAC members (IC50 > 20 μM). In MCF-7 breast cancer cells, Droxinostat (10 μM–100 μM) sensitizes cells to apoptosis by decreasing c-FLIPL and c-FLIPS expression, reducing cell survival, and inducing apoptosis. in vivo: In SCID mice models, Droxinostat (30 μM)-treated PPC-1 cells results in decreased distant tumor formation than untreated cells.

IC_{50} & Target

HDAC8	HDAC6	HDAC3
1.46 μM (IC_{50})	2.47 μM (IC_{50})	16.9 μM (IC_{50})

Solvent&Solubility

In Vitro:

DMSO : ≥ 150 mg/mL (615.54 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1036 mL	20.5179 mL	41.0357 mL
	5 mM	0.8207 mL	4.1036 mL	8.2071 mL
	10 mM	0.4104 mL	2.0518 mL	4.1036 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 (10.26 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (10.26 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 (10.26 mM); Clear solution

	此方案可获得 ≥ 2.5 mg/mL (10.26 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。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (10.26 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (10.26 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]. Liu J, et al. Droxinostat, a Histone Deacetylase Inhibitor, Induces Apoptosis in Hepatocellular Carcinoma Cell Lines via Activation of the Mitochondrial Pathway and Downregulation of FLIP. Transl Oncol. 2016 Feb;9(1):70-8. [2]. Wood TE et al. Selective inhibition of histone deacetylases sensitizes malignant cells to death receptor ligands. Mol Cancer Ther. 2010 Jan;9(1):246-56. [3]. MMcCourt C, Maxwell P, Mazzucchelli R, Montironi R, Scarpelli M, Salto-Tellez M, O'Sullivan JM, Longley DB, Waugh DJ.,Elevation of c-FLIP in Castrate-Resistant Prostate Cancer Antagonizes Therapeutic Response to Androgen Receptor-Targeted Therapy.,Clin Cancer Res. 2012 Jul 15;18(14):3822-33. Epub 2012 May 23 [4]. Bijangi-Vishehsaraei K, Saadatzadeh MR, Huang S, Murphy MP, Safa AR.,4-(4-Chloro-2-methylphenoxy)-N-hydroxybutanamide (CMH) targets mRNA of the c-FLIP variants and induces apoptosis in MCF-7 human breast cancer cells.,Mol Cell Biochem. 2010 Sep;342(1-2):133-42. Epub 2010 May 6. [5]. Wood TE, Dalili S, Simpson CD, Sukhai MA, Hurren R, Anyiwe K, Mao X, Suarez Saiz F, Gronda M, Eberhard Y, MacLean N, Ketela T, Reed JC, Moffat J, Minden MD, Batey RA, Schimmer AD.,Selective inhibition of histone deacetylases sensitizes malignant cells to death receptor ligands.,Mol Cancer Ther. 2010 Jan;9(1):246-56. Epub 2010 Jan 6.