产品名称：**KRIBB11**
产品别名：**KRIBB11**

生物活性：

Description	KRIBB11 is an inhibitor of Heat shock factor 1 (HSF1), with IC_{50} of 1.2 μM.
IC_{50} & Target	HSF1
	1.2 μM (IC_{50})
In Vitro	KRIBB11 blocks the induction of HSF1 downstream target proteins such as HSP27 and HSP70. KRIBB11 induces growth arrest and apoptosis of HCT-116 cells. KRIBB11 inhibits HSF1-dependent recruitment of p-TEFb (positive transcription elongation factor b) to the hsp70 promoter[1]. PARP and caspase-3 cleavage is increased in cells treated with KRIBB11. Incubating RKO with KRIBB11, shows a toxic threshold of about 10 μM, and an IC50 of 20-30 μM[2].
In Vivo	KRIBB11 (50 mg/kg, i.p.) results in a 47.4% inhibition of tumor growth in nude mice, without body weight loss[1]..

Solvent&Solubility

In Vitro:

DMSO : ≥ 27 mg/mL (94.98 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5178 mL	17.5889 mL	35.1778 mL
	5 mM	0.7036 mL	3.5178 mL	7.0356 mL
	10 mM	0.3518 mL	1.7589 mL	3.5178 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]. Yoon YJ, et al. KRIBB11 inhibits HSP70 synthesis through inhibition of heat shock factor 1 function by impairing the recruitment of positive transcription elongation factor b to the hsp70 promoter. J Biol Chem. 2011 Jan 21;286(3):1737-47

[2]. Samarasinghe B, et al. Heat shock factor 1 confers resistance to Hsp90 inhibitors through p62/SQSTM1 expression and promotion of autophagic flux. Biochem Pharmacol. 2014 Feb 1;87(3):445-55

实验参考：

Cell Assay	Cells are seeded onto 96-well plates at a density of 6×10^3 cells per well in McCoy's 5A medium with 10% FBS. After 24 h, the medium is replenwashed with fresh complete medium containing chemicals or 0.1% DMSO. After incubation for 48 h, the cell proliferation reagent WST-1 is added to each well. The amount of WST-1 formazan produced is measured at 450 nm using an ELISA reader.［1］
Animal Administration	Seven-week-old female inbred specific pathogen-free Balb/c nude mice are housed under sterile conditions with 12-h light/dark cycles, and fed food and water ad libitum. For the evaluation of the in vivo anti-tumor activity of KRIBB11, HCT-116 cells (0.3 mL of 4×10^7 cells/mL) are implanted subcutaneously into the right flank of the mice on day 0. KRIBB11 is dissolved in 10% dimethylacetamide, 50% PEG300, and 40% distilled water. When the size of tumors reached 72.2

	mm^3, the compound is administered intraperitoneally at a dose of 50 mg/kg/day for 18 days. Tumor volumes are estimated by using the formula length (mm) × width (mm) × height (mm)/2. To determine the toxicity of the compound, the body weight of tumor-bearing animals is recorded. On day 18, the mice are sacrificed, and the tumors are weighed. [1]
Kinase Assay	HCT-116 cells are washed with PBS and then homogenized with a 27-gauge syringe in binding buffer (10 mm Tris-HCl (pH 7.4), 50 mm KCl, 5 mm $MgCl_2$, 1 mm EDTA, and 0.1 mm Na_3VO_4). The cell lysate is centrifuged at 13,000 rpm for 30 min at 4°C, and the supernatant is collected. The HCT-116 cell lysate supernatant is precleared by incubating with Dynabeads M-280 streptavidin for 30 min at 4°C and captured by magnet separation. The cleared supernatants are incubated with biotinyl-KRIBB11 compound. After overnight incubation at 4°C, proteins associated with the biotinyl-KRIBB11 compound are precipitated with Dynabeads M-280 streptavidin. Precipitated samples are separated by a magnet. Samples are washed with 1 mL of ishing buffer containing 50 mm HEPES (pH 7.5), 50 mm NaCl, 1 mm EDTA, 1 mm EGTA, 0.1% Tween 20, 10% (v/v) glycerol, 1 mm NaF, 0.1 mm Na_3VO_4, and protease inhibitor mixture tablets (1 tablet/10 mL). Samples are boiled in SDS-PAGE sample buffer, separated by 10% polyacrylamide gel, and immunoblotted with antibodies against HSF1, HSF2, HSP90, or CDK9. [1]
References	[1]. Yoon YJ, et al. KRIBB11 inhibits HSP70 synthesis through inhibition of heat shock factor 1 function by impairing the recruitment of positive transcription elongation factor b to the hsp70 promoter. J Biol Chem. 2011 Jan 21;286(3):1737-47 [2]. Samarasinghe B, et al. Heat shock factor 1 confers resistance to Hsp90 inhibitors through p62/SQSTM1 expression and promotion of autophagic flux. Biochem Pharmacol. 2014 Feb 1;87(3):445-55

源叶生物