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：AS1842856
产品别名：AS1842856

生物活性：

Description	AS1842856, a specific Foxo1 inhibitor (IC50=30 nM), potently suppresses autophagy[1]. AS1842856 inhibits FoxO1 activity by suppressing the expression of SIRT1. AS1842856 only reduces the activity of FoxO1 by binding with it, without affecting its transcription and protein expression[2].
IC_{50} & Target	IC50: 30 nM (Foxo1)[1]
In Vitro	AS1842856 potently inhibits human Foxo1 transactivation and reduces glucose production through the inhibition of glucose-6 phosphatase and phosphoenolpyruvate carboxykinase mRNA levels in a rat hepatic cell line[1]. After AS1842856 treatment, there is no significant difference in the protein expression of p-FoxO1 and FoxO1 compared with the control group, but the expression of p-Akt is decreased compared with the control group[2].
In Vivo	Oral administration of AS1842856 to diabetic db/db mice leads to a drastic decrease in fasting plasma glucose level via the inhibition of hepatic gluconeogenic genes, whereas administration to normal mice has no effect on the fasting plasma glucose level. Treatment with AS1842856 also suppresses an increase in plasma glucose level caused by pyruvate injection in both normal and db/db mice[1].
Solvent&Solubility	***In Vitro:*** **DMSO : 5 mg/mL (14.39 mM;** Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8787 mL	14.3935 mL	28.7869 mL
	5 mM	0.5757 mL	2.8787 mL	5.7574 mL
	10 mM	0.2879 mL	1.4393 mL	2.8787 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]. Nagashima T, et al. Discovery of novel forkhead box O1 inhibitors for treating type 2 diabetes: improvement of fasting glycemia in diabetic db/db mice. Mol Pharmacol. 2010 Nov;78(5):961-70. [2]. He J, et al. The resistant effect of SIRT1 in oxidative stress-induced senescence of rat nucleus pulposus cell is regulated by Akt-FoxO1 pathway. Biosci Rep. 2019 May 10;39(5). pii: BSR20190112.

实验参考：

Cell Assay	Rat hepatoma Fao cells are cultured in DMEM with 5.5 mM glucose and 10% FBS. Glucose production rate is measured using glucose CII-test reagent. In brief, after 18 h of treatment with AS1842856 at the indicated concentrations, the cells are ished three times with PBS. The cells are then incubated for 3 h at 37°C in 5% CO2 in a glucose production buffer (glucose-free DMEM, pH 7.4, containing 20 mM sodium pyruvate, without phenol red)[1].
	AS1842856 is dissolved in 6% cyclodextrin for oral administration. Pyruvate or glucose tolerance tests are performed in male mice aged 7 to 9 weeks. Mice are orally administered either AS1842856

Animal Administration	dissolved in 6% cyclodextrin or vehicle (6% cyclodextrin only) at three time points (8 AM, 6 PM, and 8 AM on the second day). Food is removed after initial dosing and withheld throughout the study (26-h fasting)[1].
References	[1]. Nagashima T, et al. Discovery of novel forkhead box O1 inhibitors for treating type 2 diabetes: improvement of fasting glycemia in diabetic db/db mice. Mol Pharmacol. 2010 Nov;78(5):961-70. [2]. He J, et al. The resistant effect of SIRT1 in oxidative stress-induced senescence of rat nucleus pulposus cell is regulated by Akt-FoxO1 pathway. Biosci Rep. 2019 May 10;39(5). pii: BSR20190112.