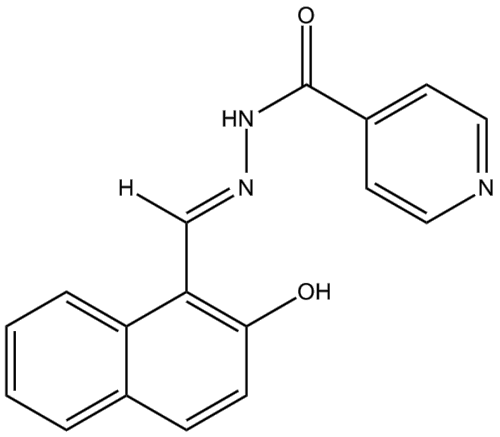
Product Data Sheet

Product Name: AS8351
Cat. No.: GC17820

Chemical Properties

Cas. No.	796-42-9		
Chemical Name	(E)-N'-((2-hydroxynaphthalen-1-yl)methylene)isonicotinohydrazide		
SMILES	OC(C=CC1=CC=CC=C12)=C2/C([H])=N/NC(C3=CC=NC=C3)=O		
Formula	$C_{17}H_{13}N_3O_2$	M.Wt	291.3
Solubility	≥ 29.1mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

IC50: N/A

AS8351 is a histone demethylase inhibitor.

Histone methylation is considered as a more dynamic modification with the discovery of Histone demethylases. Removal of methyl groups is mediated by LSD1, PAD14 and JmjC domain containing

proteins.

In vitro: In a previous study, in order to identify indispensable factors for human fibroblasts, the authors removed combined compounds one by one and treated cells with the remaining compounds. Results showed that the number of beating clusters was significantly reduced by removal of seven compounds including AS8351. Moreover, these seven compounds inlcuding AS8351 were sufficient and necessary to induce cardiac reprogramming efficiently. The authors then investigated the role of the reprogramming compound of AS8351 and the results showed that AS8351 and its functional analogs could affect epigenetic modifications by competing with α- ketoglutarate for chelating iron/Fe(II) in some epigenetic enzymes, including the JmjC-domain-containing histone demethylases that require α-KG and iron as co-factors. In addition, the authors abrogated each of the 22 genes in the JmjC-KDM family by small hairpin RNAs and found that only with KDM5B knockdown, or using a KDM5B inhibitor, PBIT could phenocopy AS8351 in generating ciCMs, indicating that it might be a target of AS8351 [1].

In vivo: Currently, there is no animal in vivo data reported.

Clinical trial: Up to now, AS8351 is still in the preclinical development stage.

Reference:
[1] N. Cao, Y. Huang, J. Zheng,et al.Conversion of human fibroblasts into functional cardiomyocytes by small molecules.Science 352(6290),1216-1220(2016).