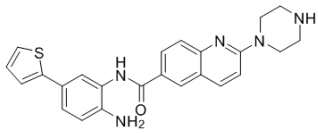
# ACY-957

| | |
|---|---|
| **Cat. No.:** | HY-104008 |
| **CAS No.:** | 1609389-52-7 |
| **Molecular Formula:** | $C_{24}H_{23}N_5OS$ |
| **Molecular Weight:** | 429.54 |
| **Target:** | HDAC |
| **Pathway:** | Cell Cycle/DNA Damage; Epigenetics |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

**DMSO : 83.33 mg/mL (194.00 mM;** Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | **1 mM** | 2.3281 mL | 11.6404 mL | 23.2807 mL |
| | **5 mM** | 0.4656 mL | 2.3281 mL | 4.6561 mL |
| | **10 mM** | 0.2328 mL | 1.1640 mL | 2.3281 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.08 mg/mL (4.84 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.08 mg/mL (4.84 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.08 mg/mL (4.84 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

ACY-957 is a selective inhibitor of **HDAC1** and **HDAC2**, with **$IC_{50}$**s of 7 nM, 18 nM, and 1300 nM against HDAC1/2/3, respectively, and shows no inhibition on HDAC4/5/6/7/8/9.

| **$IC_{50}$ & Target** | HDAC1 | HDAC2 | HDAC3 |
|---|---|---|---|
| | 7 nM ($IC_{50}$) | 18 nM ($IC_{50}$) | 1300 nM ($IC_{50}$) |

| | |
|---|---|
| **In Vitro** | ACY-957 is a selective inhibitor of HDAC1 and HDAC2, with $IC_{50}$s of 7 nM, 18 nM, and 1300 nM against HDAC1/2/3, respectively, and shows no inhibition on HDAC4/5/6/7/8/9. ACY-957 has an $IC_{50}$ of 304 nM for HDAC2 in primary hematopoietic progenitors[1]. |

## REFERENCES

[1]. Shearstone JR, et al. Chemical Inhibition of Histone Deacetylases 1 and 2 Induces Fetal Hemoglobin through Activation of GATA2. PLoS One. 2016 Apr 13;11(4):e0153767.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA