SZABO SCANDIC

Part of Europa Biosite

# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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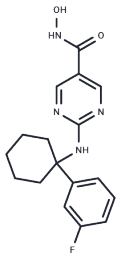
# Data Sheet (Cat.No.TQ0074)

TargetMol

## ACY-775

### Chemical Properties



CAS No. : 1375466-18-4

Formula: C17H19FN4O2

Molecular Weight: 330.36

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### Biological Description

| | |
|---|---|
| Description | ACY-775 is an effective and specific inhibitor of HDAC6 (IC50: 7.5 nM). |
| Targets(IC50) | HDAC |
| In vitro | Upon treatment with ACY-775, a clear enhancement of the acetylation of α-tubulin is visible, while histone acetylation remains unaltered. Acetylation of α-tubulin is visualized by immunofluorescence and the intensity in the neurites of the neurons is quantified and normalized to the length of the fluorescent signal. In vehicle-treated DRG neurons, acetylated α-tubulin is already present. Upon treatment with ACY-775, the signal intensity of acetylated α-tubulin increases significantly. A significant increase in motility of mitochondria and also the total number of mitochondria within the neurites are observed compared with vehicle-treated DRG neurons. A significantly higher number of retrogradely transport mitochondria is observed in DRG neurons treated with ACY-775 compared with vehicle-treated cells [1]. |
| In vivo | Biodistribution profiles of ACY-775 are examined after acute dosing at 5 or 50?mg/kg over 2?h. At t=30?min after acute 50?mg/kg injection, respective plasma levels of ACY-775 is 1359?ng/mL (4.1?μM). Elimination from the plasma is rapid, with a plasmatic half-life of 12?min and a concentration below 10?ng/mL after 2?h. When ACY-775 (50?mg/kg) is administered repeatedly in wild-type mice at 24?h, 4?h, and 30?min before killing, significant increases in α-tubulin acetylation are observed in all tested brain regions [2]. |
| Cell Research | Undifferentiated RN46A-B14 cells are grown. They are treated with 2.5?μM ACY-738, ACY-775, tubastatin A, 0.6?μM TSA or vehicle (0.1% DMSO) for 4?h. Samples are processed using a histone extraction kit and quantified using protein assay [2]. |
| Animal Research | Mice are tested for immobility in the TST. At 30?min or 2?h after i.p. injection of ACY-738 (5, 50?mg/kg), ACY-775 (5, 50?mg/kg), and citalopram (0.5, 2, 20?mg/kg), a combination of the previous, or vehicle, mice are attached to the test rig and time immobile over 6?min is recorded. For open-field activity, mice are injected with ACY-738 or ACY-775 at 5, 10, or 50?mg/kg or vehicle and allowed to explore [2]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 100 mg/mL (302.70 mM),Sonication and heating are recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.027 mL | 15.135 mL | 30.270 mL |
| 5 mM | 0.6054 mL | 3.027 mL | 6.054 mL |
| 10 mM | 0.3027 mL | 1.5135 mL | 3.027 mL |
| 50 mM | 0.0605 mL | 0.3027 mL | 0.6054 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Veronick Benoy, et al. Development of Improved HDAC6 Inhibitors as Pharmacological Therapy for Axonal Charcot-Marie-Tooth Disease. Neurotherapeutics. 2017 Apr; 14(2): 417-428.