

Product Data Sheet

Product Name: CAY10591

Cat. No.: GC41601

Chemical Properties

Cas. No. 839699-72-8

SMILES COCCc1c2nc3cccc3nc2c(C(=O)NC2CCCC2)c1N=N

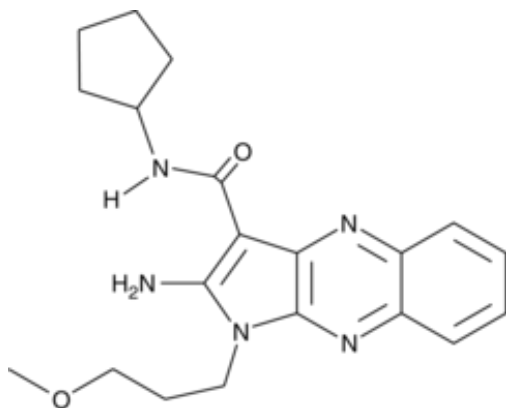
Formula C₂₀H₂₅N₅O₂ M.Wt 367.5

Solubility DMF: 30 mg/ml, DMF:PBS (pH 7.2) Storage Store at -20°C
(1:1): 0.5 mg/ml, DMSO: 20 mg/ml, Ethanol: 1 mg/ml

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

Sirtuins (SIRT1) represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs). Human SIRT1 is the homolog of yeast silent information regulator 2 (Sir2) and has been shown to regulate the activity of the p53 tumor suppressor and inhibit apoptosis. Small molecule

Caution: Product has not been fully validated for medical applications. For research use only.

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activators of SIRT1, such as resveratrol, extend lifespan in yeast and *C. elegans* in a manner that resembles caloric restriction. CAY10591 has been identified as an activator of the enzyme SIRT1. This compound increases fluorescence by 233% in a SIRT1 activity assay. [Activator activity was defined as the percentage of signal increase relative to signal window in the following formula: $100 \times (\text{Sample} - \text{Signal low}) / (\text{Signal high} - \text{Signal low})$]. CAY10591 suppresses TNF- α in a dose-dependent manner. In THP-1 cells, TNF- α levels decreased from 325 pg/ml (control) to 104 and 53 pg/ml with 20 and 60 μ M CAY10591, respectively. This activator also has a significant dose-dependent effect on fat mobilization in differentiated adipocytes, which would indicate the potential of SIRT1 activators for anti-obesity or anti-diabetic purposes.

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