

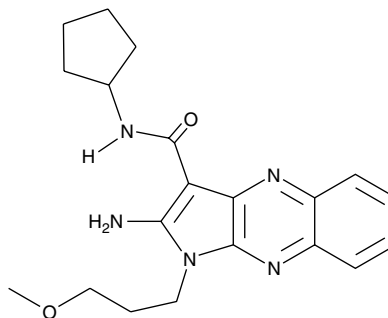
Product Information



CAY10591

Item No. 10009797

CAS Registry No.: 839699-72-8
Formal Name: 2-amino-N-cyclopentyl-1-(3-methoxypropyl)-1H-pyrrolo[2,3-b]quinoxaline-3-carboxamide
Synonyms: SIRT1 Activator 3, Sirtuin 1 Activator 3
MF: C₂₀H₂₅N₅O₂
FW: 367.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 234, 253, 273, 335, 381 nm



Laboratory Procedures

For long term storage, we suggest that CAY10591 be stored as supplied at -20°C. It should be stable for at least two years.

CAY10591 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10591 in an organic solvent purged with an inert gas. CAY10591 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CAY10591 in these solvents is approximately 1, 20, and 30 mg/ml, respectively.

CAY10591 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10591 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CAY10591 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Sirtuins (SIRT) 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 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.¹ [Activator activity was defined as the percentage of signal increase relative to signal window in the following formula: 100 x (Sample - Signal_{low})/(Signal_{high} - 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 μM 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.¹

Reference

1. Nayagam, V.M., Wang, X., Tan, Y.C., *et al.* SIRT1 modulating compounds from high-throughput screening as anti-inflammatory and insulin-sensitizing agents. *Journal of Biomolecular Screening* **11**(8), 959-967 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009797

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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