

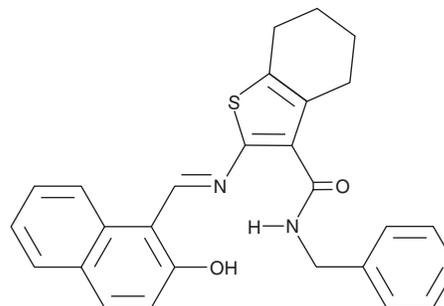
PRODUCT INFORMATION



JGB1741

Item No. 10641

CAS Registry No.: 1256375-38-8
Formal Name: 4,5,6,7-tetrahydro-2-[(E)-[(2-hydroxy-1-naphthalenyl)methylene]amino]-N-(phenylmethyl)-benzo[b]thiophene-3-carboxamide
Synonym: ILS-JGB-1741
MF: C₂₇H₂₄N₂O₂S
FW: 440.6
Purity: ≥98%
UV/Vis.: λ_{max}: 212, 419 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

JGB1741 is supplied as a crystalline solid. A stock solution may be made by dissolving the JGB1741 in the solvent of choice, which should be purged with an inert gas. JGB1741 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of JGB1741 in these solvents is approximately 0.2 and 0.14 mg/ml, respectively.

Description

The sirtuins (SIRT) are a family of NAD⁺-dependent histone deacetylases involved in gene regulation that is relevant to longevity, cancer, gene regulation, energy homeostasis, and apoptosis.^{1,2} JGB1741 is a small molecule inhibitor of SIRT1 with an IC₅₀ value of 15 μM in a cell-free assay.³ It shows relatively weak inhibition for SIRT2 and SIRT3 with IC₅₀ values greater than 100 μM. JGB1741 inhibits metastatic breast cancer MDA-MB 231 cell proliferation with an IC₅₀ value of 512 nM in a cell-based assay and dose-dependently increases p53 acetylation and p53-mediated apoptosis in these cells.

References

1. Yamamoto, H., Schoonjans, K., and Auwerx, J. Sirtuin functions in health and disease. *Mol. Endocrinol.* **21(8)**, 1745-1755 (2007).
2. Milne, J.C. and Denu, J.M. The sirtuin family: Therapeutic targets to treat diseases of aging. *Curr. Opin. Chem. Biol.* **12(1)**, 11-17 (2008).
3. Kalle, A.M., Mallika, A., Badiger, J., et al. Inhibition of SIRT1 by a small molecule induces apoptosis in breast cancer cells. *Biochem. Biophys. Res. Commun.* **401(1)**, 13-19 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM