

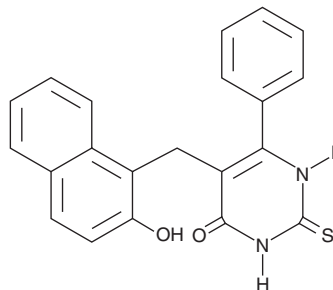
PRODUCT INFORMATION



SIRT1/2 Inhibitor IV

Item No. 14407

CAS Registry No.: 14513-15-6
Formal Name: 2,3-dihydro-5-[(2-hydroxy-1-naphthalenyl)methyl]-6-phenyl-2-thioxo-4(1H)-pyrimidinone
Synonyms: Cambinol, NSC 112546, SIRT1 Inhibitor II, SIRT2 Inhibitor VI
MF: C₂₁H₁₆N₂O₂S
FW: 360.4
Purity: ≥98%
UV/Vis.: λ_{max}: 228, 281 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

SIRT1/2 inhibitor IV is supplied as a crystalline solid. A stock solution may be made by dissolving the SIRT1/2 inhibitor IV in the solvent of choice, which should be purged with an inert gas. SIRT1/2 inhibitor IV is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SIRT1/2 inhibitor IV in these solvents is approximately 0.33, 20, and 16 mg/ml, respectively.

SIRT1/2 inhibitor IV is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SIRT1/2 inhibitor IV should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SIRT1/2 inhibitor IV has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SIRT1/2 inhibitor IV is a cell-permeable inhibitor of SIRT1 (IC₅₀ = 56 μM) and SIRT2 (IC₅₀ = 59 μM), blocking NAD⁺-dependent deacetylase activity in a substrate competitive manner.¹ It less effectively inhibits SIRT5 (IC₅₀ >300 μM) and has no effect on class I and II histone deacetylases.¹ By inhibiting SIRT1, SIRT1/2 inhibitor IV sensitizes H460 lung cancer cells to etoposide and paclitaxel and enhances etoposide-induced G₂ arrest.¹ It also blocks a SIRT1-dependent hypoxic response *in vivo*, suppressing HIF-1α protein accumulation as well as EPO and VEGF expression in HepG2 tumors in mice.²

References

1. Heltweg, B., Gatbonton, T., Schuler, A.D., *et al.* Antitumor activity of a small-molecule inhibitor of human silent information regulator 2 enzymes. *Cancer Res.* **66(8)**, 4368-4377 (2006).
2. Laemmle, A., Lechleiter, A., Roh, V., *et al.* Inhibition of SIRT1 impairs the accumulation and transcriptional activity of HIF-1α protein under hypoxic conditions. *PLoS One* **7(3)**, (2012).

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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