

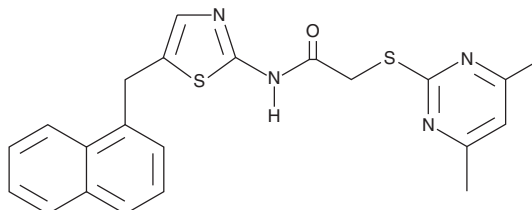
# PRODUCT INFORMATION



## SirReal2

Item No. 18116

**CAS Registry No.:** 709002-46-0  
**Formal Name:** 2-[[4,6-dimethyl-2-pyrimidinyl]thio]-N-[5-(1-naphthalenylmethyl)-2-thiazolyl]-acetamide  
**MF:** C<sub>22</sub>H<sub>20</sub>N<sub>4</sub>OS<sub>2</sub>  
**FW:** 420.5  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 247, 282 nm  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

SirReal2 is supplied as a crystalline solid. A stock solution may be made by dissolving the SirReal2 in the solvent of choice. SirReal2 is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 3 mg/ml.

SirReal2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SirReal2 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SirReal2 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Sirtuins (SIRT2s) represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs). SIRT2 deacetylates histone H4 and α-tubulin and functions as a regulator of cell cycle progression, a determinant of myelination, a modulator of autophagy, and a suppressor of brain inflammation.<sup>1-4</sup> SirReal2 is an aminothiazole that acts as a SIRT-rearranging ligand to selectively inhibit SIRT2 (IC<sub>50</sub> = 140 nM).<sup>5</sup> SirReal2 is >1,000-fold more potent at inhibiting the activity of SIRT2 than that of SIRT1 or SIRT3-6.<sup>5</sup> This compound has been shown to be active in HeLa cells by significantly increasing α-tubulin acetylation.<sup>5</sup>

### References

1. Tang, B.L. and Chua, C.E.L. SIRT2, tubulin deacetylation, and oligodendroglia differentiation. *Cell Motil. Cytoskeleton* **65**, 179-182 (2008).
2. North, B.J., Marshall, B.L., Borra, M.T., et al. The human Sir2 ortholog, SIRT2, is an NAD<sup>+</sup>-dependent tubulin deacetylase. *Mol. Cell* **11**, 437-444 (2003).
3. Dryden, S.C., Nahhas, F.A., Nowak, J.E., et al. Role for human SIRT2 NAD-dependent deacetylase activity in control of mitotic exit in the cell cycle. *Mol. Cell. Biol.* **23**(9), 3173-3185 (2003).
4. de Oliveira, R.M., Sarkander, J., Kazantsev, A.G., et al. SIRT2 as a therapeutic target for age-related disorders. *Front. Pharmacol.* **3**(82), (2012).
5. Rumpf, T., Schiedel, M., Karaman, B., et al. Selective Sirt2 inhibition by ligand-induced rearrangement of the active site. *Nat. Commun.* **6**, (2015).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2022

#### 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