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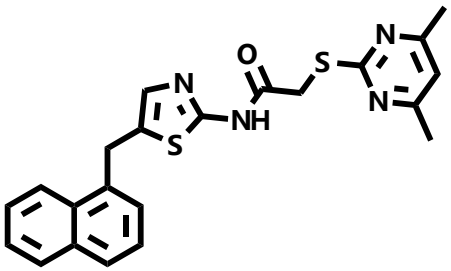
# Sirt2 Inhibitor – SirReal2

**Chemical Name:** 2-((4,6-dimethylpyrimidin-2-yl)thio)-N-(5-(naphthalen-1-ylmethyl)thiazol-2-yl)acetamide

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|---|---|
| Molecular Weight: | 420.55 |
| Formula: | $C_{22}H_{20}N_4OS_2$ |
| Purity: | ≥98% |
| CAS#: | 709002-46-0 |
| Solubility: | DMSO up to 100 mM |
| Storage | Powder: 4°C 1 year<br>DMSO: 4°C 3 month<br>-20°C 1 year |

**Biological Activity:**

SirReal2 is a potent and selective Sirt2 inhibitor with $IC_{50}$ ~140 nM, has minimal effect on Sirt1 and Sirt3-6. It occupies the extended C-site and induces a major rearrangement of Sirt2's active site, so it selectively inhibits Sirt2 and functions as a molecular wedge to lock Sirt2 in an open conformation. SirReal2 can increase tubulin hyperacetylation in HeLa cells and induces destabilization of the checkpoint protein BubR1. It could be a useful chemical tool for sirtuin biology.

**How to Use:**

**In vitro:** SirReal2 was used at 10-20 μ M final concentration in vitro and in cellular assays.

**In vivo:** n/a

**Reference:**

1. Rumpf T, et al. Selective Sirt2 inhibition by ligand-induced rearrangement of the active site. (2015) Nat Commun. 6:6263.