

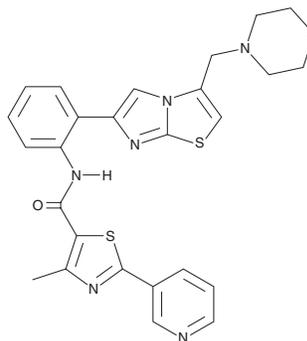
# PRODUCT INFORMATION



## SRT 2104

Item No. 28380

**CAS Registry No.:** 1093403-33-8  
**Formal Name:** 4-methyl-N-[2-[3-(4-morpholinylmethyl)imidazo[2,1-b]thiazol-6-yl]phenyl]-2-(3-pyridinyl)-5-thiazolecarboxamide  
**MF:** C<sub>26</sub>H<sub>24</sub>N<sub>6</sub>O<sub>2</sub>S<sub>2</sub>  
**FW:** 516.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 217, 298 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

SRT 2104 is supplied as a crystalline solid. A stock solution may be made by dissolving the SRT 2104 in the solvent of choice, which should be purged with an inert gas. SRT 2104 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SRT 2104 in these solvents is approximately 2 mg/ml. SRT 2104 is also slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of SRT 2104 can be prepared by directly dissolving the crystalline solid in aqueous buffers. SRT 2104 is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

SRT 2104 is an activator of sirtuin 1 (SIRT1).<sup>1</sup> It increases renal SIRT1 activity and protein levels and decreases acetylation of the SIRT1 substrate p53 in a mouse model of diabetes induced by streptozotocin (STZ; Item No. 13104), as well as in non-diabetic control animals, when administered at a dose of approximately 100 mg/kg in the diet. SRT 2104 also decreases renal levels of inducible nitric oxide synthase (iNOS), reactive oxygen species (ROS), and malondialdehyde (MDA), as well as the fibrotic markers TGF-β1 and CTGF and the inflammatory markers PAI-1 and VCAM-1, in STZ-induced diabetic mice. SRT 2104 (0.5% in the diet) increases lifespan, improves motor function in the balance beam test, and reduces atrophy of the neocortex in the N171-82Q mouse model of Huntington's disease.<sup>2</sup>

### References

1. Ma, F., Wu, J., Jiang, Z., *et al.* P53/NRF2 mediates SIRT1's protective effect on diabetic nephropathy. *Biochim. Biophys. Acta Mol. Cell Res.* **1866**(8), 1272-1281 (2019).
2. Jiang, M., Zheng, J., Peng, Q., *et al.* Sirtuin 1 activator SRT2104 protects Huntington's disease mice. *Ann. Clin. Transl. Neurol.* **1**(12), 1047-1052 (2014).

#### 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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