

SRT1720

SRT1720 is a small molecule drug that has been investigated for its potential as a treatment for a variety of conditions, including metabolic disorders, cancer, and neurological diseases. SRT1720 is a selective activator of SIRT1, a protein that belongs to the sirtuin family of enzymes. SIRT1 is involved in a variety of cellular processes, including metabolism, stress response, and aging.

SRT1720 has been shown to activate SIRT1 in a variety of tissues, including adipose tissue, liver, and skeletal muscle. In preclinical studies, SRT1720 has been shown to improve glucose tolerance and insulin sensitivity, reduce inflammation, and increase mitochondrial function. These effects suggest that SRT1720 may have potential as a treatment for metabolic disorders such as type 2 diabetes and obesity.

In addition to its effects on metabolism, SRT1720 has also been investigated for its potential anti-cancer properties. SIRT1 is thought to play a role in regulating the cell cycle and promoting cell survival, and SRT1720 has been shown to inhibit the growth of cancer cells in vitro and animal models. However, clinical trials investigating SRT1720 as a cancer treatment have not yet been conducted.

Despite promising results in preclinical studies, there are still many questions about the safety and efficacy of SRT1720 in humans. Clinical trials investigating the drug as a treatment for type 2 diabetes have been initiated, but results have not yet been published.

By targeting [SULT1E1](#)+ in MOs, the synthetic compound [SRT1720](#) is identified as a potential agent for systemic treatment and radiation [sensitization](#). These findings shed light on the mechanism underlying the [malignancy](#) of high-grade meningiomas and provide a novel therapeutic target for refractory [high-grade meningioma](#) ¹⁾.

The use of SIRT1 inhibitor (EX-527) and agonist (SRT1720) in the mice experiments verified the effect and mechanism of action of resveratrol in improving cognitive function. Our study identifies potential therapeutic targets for post-TBI cognitive dysfunction ²⁾.

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Huang M, Xu S, Li Y, Shang L, Zhan X, Qin C, Su J, Zhao Z, He Y, Qin L, Zhao W, Long W, Liu Q. Novel Human Meningioma Organoids Recapitulate the Aggressiveness of the Initiating Cell Subpopulations Identified by ScRNA-Seq. *Adv Sci (Weinh)*. 2023 Mar 30:e2205525. doi: 10.1002/advs.202205525. Epub ahead of print. PMID: 36994665.

²⁾

Yu D, Zhao XY, Meng QP, Teng D, Deng K, Lin N. Resveratrol activates the SIRT1/PGC-1 pathway in mice to improve synaptic-related cognitive impairment after TBI. *Brain Res*. 2022 Dec 1;1796:148109. doi: 10.1016/j.brainres.2022.148109. Epub 2022 Sep 29. PMID: 36183792.

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