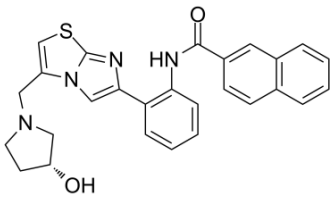
SRT 2183

Cat. No.:	HY-19759
CAS No.:	1001908-89-9
Molecular Formula:	$C_{27}H_{24}N_4O_2S$
Molecular Weight:	468.57
Target:	Sirtuin
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	SRT 2183 is a selective **Sirtuin-1 (SIRT1)** activator with an **$EC_{1.5}$** value of 0.36 μM[1]. SRT 2183 induces growth arrest and apoptosis, concomitant with deacetylation of STAT3 and NF-κB, and reduction of c-Myc protein levels[2].
IC_{50} & Target	SIRT1 0.36 μM (EC1.5)
In Vitro	SRT 2183 (1-10 μM; 24-72 hours) inhibits the growth of Reh and Nalm-6 cells in a time- and dose-dependent manner [2]. SRT 2183 (5-10 μM in Reh cells; 10 μM in Ly3 cells; 24 hours) induces expression of DNA-damage response genes associated with accumulation of phospho-H2A.X levels[2]. SRT2183 inhibits RANKL-induced osteoclast differentiation, fusion and resorptive capacity without affecting osteoclast survival[3].

Cell Proliferation Assay[2]

Cell Line:	Reh cells, Nalm-6 cells (pre-B acute lymphoblastic leukemia (ALL) cell lines)
Concentration:	1 μM, 5 μM, 10 μM
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Inhibited the growth of Reh and Nalm-6 cells in a time- and dose-dependent manner. The IC_{50} (median inhibition concentration) values for SRT 2183-mediated inhibition of proliferation at 48 h are approximately 8.7 μM for Reh cells and approximately 3.2 μM for Nalm-6 cells.

Western Blot Analysis[2]

Cell Line:	Reh cells, Ly3 cells
Concentration:	5μM and 10μM (Reh cells); 10μM (Ly3 cells)
Incubation Time:	24 hours
Result:	Induced accumulation of phospho-H2A.X in Reh as well as in Ly3 cells.

REFERENCES

[1]. Milne JC, et al. Small molecule activators of SIRT1 as therapeutics for the treatment of type 2 diabetes. Nature. 2007 Nov 29; 450(7170): 712–716.

[2]. Scuto A, et al. SIRT1 activation enhances HDAC inhibition-mediated upregulation of GADD45G by repressing the binding of NF-κB/STAT3 complex to its promoter in malignant lymphoid cells. Cell Death Dis. 2013 May; 4(5): e635.

[3]. Gurt I, et al. The Sirt1 Activators SRT2183 and SRT3025 Inhibit RANKL-Induced Osteoclastogenesis in Bone Marrow-Derived Macrophages and Down-Regulate Sirt3 in Sirt1 Null Cells. PLoS One. 2015 Jul 30;10(7):e0134391.

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