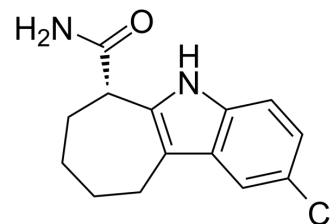


CHIC35

Cat. No.:	HY-111303
CAS No.:	848193-72-6
Molecular Formula:	C ₁₄ H ₁₅ ClN ₂ O
Molecular Weight:	262.73
Target:	Sirtuin
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	CHIC35, an analog of EX-527, is a potent and selective inhibitor of SIRT1 (IC ₅₀ =0.124 μM). CHIC35 shows potential selective inhibition against SIRT1 over SIRT2 (IC ₅₀ =2.8 μM) or SIRT3 (IC ₅₀ >100 μM) ^[1] . CHIC35 has anti-inflammatory effects and can be used for CHARGE syndrome research ^{[1][2]} .		
IC₅₀ & Target	SIRT1 0.124 μM (IC ₅₀)	SIRT2 2.8 μM (IC ₅₀)	SIRT3 >100 μM (IC ₅₀)
In Vitro	<p>CHIC-35 (0.5 μM; 16 hours) increases acetylation of histone H4 in BMDMs similar to Cambinol (200 μM)^[1].</p> <p>CHIC-35 (5 μM; 72 hours) exhibits no significant difference in the survival of embryos at early stages^[2].</p> <p>Zebrafish embryos are microinjected with 2.4 ng of chd7 MO to develop to different stages of development. chd7 morphant embryos are treated with CHIC-35 from 8hpf to 24hpf. CHIC-35 (5 μM) is removed at 24hpf and embryos are incubated in fresh egg water until 4dpf. The chd7 morphant larvae has a severely reduced and disrupted pattern of cartilage elements in comparison to the control, CHIC-35 shows partial recovery in craniofacial cartilage elements^[2].</p> <p>At 4dpf, zebrafish embryos show a well-formed lower jaw in controls, while chd7 morphants exhibits reduced lower jaw. Treatment with CHIC-35 (5 μM) rescues the expression of sox9a in chd7 morphants^[2].</p> <p>Nearly 30% of chd7 morphant embryos (24hpf to 72hpf) shows a near complete loss of isl2a expression in the cranial region compared to 10% of the wildtype controls. CHIC-35 reduces this to 7.5% significantly. However, CHIC-35 shows no discernible effect on the enteric neurons marked by Tg^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>		

REFERENCES

[1]. Jérôme Lugin, et al. The sirtuin inhibitor cambinol impairs MAPK signaling, inhibits inflammatory and innate immune responses and protects from septic shock. *Biochim Biophys Acta*. 2013 Jun;1833(6):1498-510

[2]. Zainab Asad, et al. Chemical screens in a zebrafish model of CHARGE syndrome identifies small molecules that ameliorate disease-like phenotypes in embryo. *Eur J Med Genet*. 2020 Feb;63(2):103661.

Caution: Product has not been fully validated for medical applications. For research use only.

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