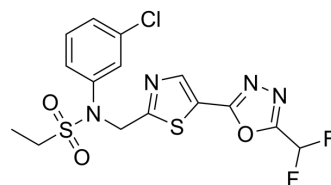


TYA-018

Cat. No.:	HY-153392
CAS No.:	2653254-31-8
Molecular Formula:	C ₁₅ H ₁₃ ClF ₂ N ₄ O ₃ S ₂
Molecular Weight:	434.87
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	TYA-018 is an orally active, potent and highly selective HDAC6 inhibitor. TYA-018 can protect heart function in mice. TYA-018 also enhances energetics in mice by increasing expression of targets associated with fatty acid metabolism, protein metabolism, and oxidative phosphorylation ^[1] .									
IC₅₀ & Target	HDAC6									
In Vivo	<p>TYA-018 (15 mg/kg, Oral gavage, daily, for 8 weeks) protects against sarcomere damage and reduced Nppb expression in BAG3^{CKO} mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>BAG3^{CKO} mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>15 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage, daily, starting at 2 months old, for 8 weeks</td> </tr> <tr> <td>Result:</td> <td>Conferred cardioprotection in mice. Significantly reduced Nppb expression to near WT. Reduced fibrosis in BAG3^{CKO} mice, albeit not significantly. partially restored protein expression of FLNC, PINK1, VDAC2, and p62 to amounts similar to WT mice. Significantly reduced the percentage of cardiomyocytes with damaged and reduced sarcomeres in BAG3^{CKO} mice. Significantly reduced mitochondrial content to amounts similar to WT mice.</td> </tr> </table>		Animal Model:	BAG3 ^{CKO} mice ^[1]	Dosage:	15 mg/kg	Administration:	Oral gavage, daily, starting at 2 months old, for 8 weeks	Result:	Conferred cardioprotection in mice. Significantly reduced Nppb expression to near WT. Reduced fibrosis in BAG3 ^{CKO} mice, albeit not significantly. partially restored protein expression of FLNC, PINK1, VDAC2, and p62 to amounts similar to WT mice. Significantly reduced the percentage of cardiomyocytes with damaged and reduced sarcomeres in BAG3 ^{CKO} mice. Significantly reduced mitochondrial content to amounts similar to WT mice.
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REFERENCES

[1]. Yang J, et al. Phenotypic screening with deep learning identifies HDAC6 inhibitors as cardioprotective in a BAG3 mouse model of dilated cardiomyopathy. *Sci Transl Med.* 2022 Jul 6;14(652):eabl5654.

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

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