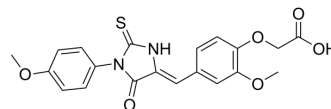


ZW290

Cat. No.:	HY-148973
CAS No.:	2411852-67-8
Molecular Formula:	C ₂₀ H ₁₈ N ₂ O ₆ S
Molecular Weight:	414.43
Target:	ATP Synthase
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	ZW290 is a compound to activate brown adipose tissue (BAT) thermogenic function. ZW290 increases the expression of uncoupling Protein 1 (UCP1) protein and inhibits ATP synthesis in BAT ^[1] .
In Vitro	ZW290 in brown adipose tissue (BAT) induces nonshivering thermogenesis by limiting the oxidation of lipid droplet-derived fatty acids and increasing UCP1 protein levels ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	ZW290 (25-100 mg/kg; oral gavage; once a day; for 7 days) notably decreases the size of lipid droplets in BAT and increased the content of mitochondria and the expression of UCP1 in brown adipose tissue (BAT) and white adipose tissue (WAT). ZW290 could prolong the overall survival of mice ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	Male Kunming (KM) mice (20 g) keeping under acute cold exposure (-20°C) ^[1]
Dosage:	25 mg/kg, 50 mg/kg, or 100 mg/kg
Administration:	Oral gavage; once a day; for 7 days
Result:	Notably decreased the size of lipid droplets in BAT and increased the content of mitochondria and the expression of UCP1 in BAT and WAT.

REFERENCES

[1]. Nan Wang, et al. ZW290 Increases Cold Tolerance by Inducing Thermogenesis via the Upregulation of Uncoupling Protein 1 in Brown Adipose Tissue In Vitro and In Vivo. *Lipids*. 2019 May;54(5):265-276.

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

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