

Zilucoplan TFA

Cat. No.: HY-P3502A

Molecular Formula: $C_{172}H_{278}N_{24}O_{55} \cdot xC_2HF_3O_2$

Target: Complement System

Pathway: Immunology/Inflammation

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Zilucoplan TFA (RA101495), a 15-amino acid macrocyclic peptide, is a potent complement component 5 (C5) inhibitor. Zilucoplan TFA can be used in research of immune-mediated necrotising myopathy (IMNM) ^{[1][2]} .
In Vitro	Zilucoplan (RA101495; 1-1000 nM; 30 min) inhibit Lipopolysaccharides -induced increase in C5a plasma levels in human whole blood with an IC ₅₀ value of 474.5 pM. Zilucoplan has a 65.7% reduction in C5a plasma levels observed at a concentration of 1 nM ^[2] . Zilucoplan binds to complement component 5 (C5) and blocks the downstream assembly of the membrane attack complex (MAC; C5b-9) by inhibiting the cleavage of C5 by the C5 convertase into C5a and C5b and binding to preformed C5b to sterically block interaction with C6, thereby inhibiting the formation of membrane pores and subsequent cell death ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Zilucoplan (RA101495; 10 mg/kg; S.C.; daily, for 6 d) prevents the development of immune-mediated necrotising myopathy (IMNM) in C5-deficient mice supplemented with human complement ^[1] . Zilucoplan (10 mg/kg; S.C.; daily, for 6 d) has protection on myopathy prevention in C57BL/6 mice ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Julien S, et, al. Prevention of Anti-HMGCR Immune-Mediated Necrotising Myopathy by C5 Complement Inhibition in a Humanised Mouse Model. *Biomedicines*. 2022 Aug 20;10(8):2036.
- [2]. Gorman DM, et, al. Chemical synthesis and characterisation of the complement C5 inhibitory peptide zilucoplan. *Amino Acids*. 2021 Jan;53(1):143-147.

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

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