AMY-101 TFA

Cat. No.:	HY-P1717A
CAS No.:	1789738-04-0
Molecular Formula:	$C_{83}H_{117}N_{23}O_{18}S_2.xC_2HF_3O_2$
Sequence Shortening:	YICV-{Trp(Me)}-QDW-{Sar}-AHRC-{N(Me)Ile}-NH2 (Disulfide bridge:Cys3-Cys13)
Target:	Complement System; SARS-CoV
Pathway:	Immunology/Inflammation; Anti-infection
Storage:	Sealed storage, away from moisture and light Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

YICV-{Trp(Me)}-QDW-{Sar}-AHRC-{N(Me)Ile}-NH_2
(Disulfide bridge:Cys3-Cys13) (TFA salt)

SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (Need ultrasonic) H_2O : 100 mg/mL (Need ultrasonic)

BIOLOGICAL ACTIVITY

Description	AMY-101 TFA (Cp40 TFA), a peptidic inhibitor of the central complement component C3 (K_D = 0.5 nM), inhibits naturally occurring periodontitis in non-human primates (NHPs). AMY-101 (Cp40) exhibits a favorable anti-inflammatory activity in models with COVID-19 severe pneumonia with systemic hyper inflammation[1][2].
IC_{50} & Target	KD: 0.5 nM (C3)[1].

In Vivo

AMY-101 can improve the periodontal condition of NHPs with natural chronic periodontitis[1].
AMY-101 can induce a long-lasting anti-inflammatory effect[1].
AMY-101 (4 mg/kg bodyweight, subcutaneous injection. once per 24 hr for a total of 28 days) causes a significant and long-lasting reduction in PPD, an index that measures tissue destruction[1].
AMY-101 (Cp40, 1 mg/kg, sc, injection every 12 h, daily, 7 or 14 days) attenuates fibrosis and infiltration of inflammatory cells in UUO-induced renal fibrosis[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Fifteen adult male cynomolgus monkeys (Macaca fascicularis) (7-15 years old; 5.0-7.6 kg body weight)[1].
Dosage:	0.1 mg/site; 50 μL of 2 mg/mL solution.
Administration:	Injected locally. (Either three times per week or once a week for 6 weeks followed by a 6-week follow-up period without treatment.)
Result:	Does not cause irritation in healthy gingiva.

Animal Model:	UUO and sham-operated mice[3].
Dosage:	1 mg/kg.
Administration:	Subcutaneous injection every 12 h, daily, 7 or 14 days.
Result:	1 mg/kg Cp40 had much less severe interstitial fibrosis than control peptide-injected mice.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2021 Jan 8;49(D1):D1113-D1121.

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REFERENCES

[1]. Kajikawa T, et al. Safety and Efficacy of the Complement Inhibitor AMY-101 in a Natural Model of Periodontitis in Non-human Primates. Mol Ther Methods Clin Dev. 2017 Aug 18;6:207-215.

[2]. Mastaglio S, et al. The first case of COVID-19 treated with the complement C3 inhibitor AMY-101. Clin Immunol. 2020 Apr 29:108450.

[3]. Yanyan Liu, et al. Complement C3 Produced by Macrophages Promotes Renal Fibrosis via IL-17A Secretion. Front Immunol. 2018 Oct 22;9:2385.

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