Mecasermin

Cat. No.:	HY-108905
CAS No.:	68562-41-4
Molecular Formula:	$C_{331}H_{512}N_{94}O_{101}S_7$
Molecular Weight:	7645.68
Sequence:	Gly-Pro-Glu-Thr-Leu-Cys-Gly-Ala-Glu-Leu-Val-Asp-Ala-Leu-Gln-Phe-Val-Cys-Gly-Asp-Arg-Gly-Phe-Tyr-Phe-Asn-Lys-Pro-Thr-Gly-Tyr-Gly-Ser-Ser-Ser-Arg-Arg-Ala-Pro-Gln-Thr-Gly-Ile-Val-Asp-Glu-Cys-Cys-Phe-Arg-Ser-Cys-Asp-Leu-Arg-Arg-Leu-Glu-Met-Tyr-Cys-Ala-Pro-Leu-Lys-Pro-Ala-Lys-Ser-Ala (Disulfide bridge:Cys6-Cys48;Cys18-Cys61;Cys47-Cys52)
Sequence Shortening:	GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKSA (Disulfide bridge:Cys6-Cys48;Cys18-Cys61;Cys47-Cys52)
Target:	IGF-1R
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Mecasermin (Human IGF-I; FK 780) is a recombinant human insulin-like growth factor I (IGF-I). Mecasermin has the potential for the study of the growth failure of growth hormone (GH) insensitivity caused by GH receptor defects or GH-inhibiting antibodies[1].

In Vivo

Mecasermin (rhIGF1; 0.25 mg/kg; i.p.; daily; 6 weeks) increases IGF1 concentration in serum to near-normal levels and ameliorates a wide range of phenotypes, including organismal and behavioral function, synaptic and circuit plasticity, neuronal structure, and molecular signaling pathways[2].

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

Animal Model:	Mecp2 hemizygous KO mice[2]
Dosage:	0.25 mg/kg
Administration:	i.p.; daily; 6 weeks
Result:	Improved lifespan, locomotor activity, heart rate, respiration patterns, and social and anxiety behavior.

REFERENCES

[1]. Arlan L Rosenbloom. Mecasermin (recombinant human insulin-like growth factor I). Adv Ther. 2009 Jan;26(1):40-54.

[2]. Jorge Castro, et al. Functional recovery with recombinant human IGF1 treatment in a mouse model of Rett Syndrome. Proc Natl Acad Sci U S A. 2014 Jul 8;111(27):9941-6.

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

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