

Ecnoglutide

Cat. No.:	HY-P3366
CAS No.:	2459531-73-6
Molecular Formula:	C194H304N48O61
Molecular Weight:	4284.76
Sequence:	His-Val-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Glu-Gln-Ala-Ala-Arg-Glu-Phe-Ile-Lys-(AEEA-AEEA- γ -Glu)-C18 diacid)-Trp-Leu-Val-Arg-Gly-Arg-Gly
Sequence Shortening:	HVEGTFTSDVSSYLEEQAAREFIK-(AEEA-AEEA- γ -Glu)-C18 diacid)-WLVRGRG
Target:	GCGR
Pathway:	GPCR/G Protein
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

Ecnoglutide

SOLVENT & SOLUBILITY

In Vitro

H₂O : 25 mg/mL (5.83 mM; Need ultrasonic)
H₂O : 20 mg/mL (4.67 mM; ultrasonic and adjust pH to 12 with 1M NaOH)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		0.2334 mL	1.1669 mL	2.3339 mL
	5 mM		0.0467 mL	0.2334 mL	0.4668 mL
	10 mM		---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Ecnoglutide (XW003) is a long-acting, cAMP-biased glucagon-like peptide 1 (GLP-1) receptor agonist. Ecnoglutide can be used for research of T2DM and obesity^{[1][2]}.

In Vitro

Ecnoglutide induces cAMP but not GLP-1 receptor internalization (EC₅₀ = 0.018 nM)^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Ecnoglutide (0.015, 0.15 mg/kg, s.c., a single time) reduces blood glucose, promotes insulin induction, and leads to more pronounced body weight reduction compared to Semaglutide (HY-114118) in db/db mice^[2].
Ecnoglutide (1 mg/kg, s.c., rats) shows the T_{1/2} (h), T_{max} (h), C_{max} (nM), AUClast (h*nM), MRT (h) values of 11.7, 18.0, 387.3, 16274.8, 25.4 respectively^[2].

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

REFERENCES

- [1]. Guo W, et al. Discovery of ecnoglutide - A novel, long-acting, cAMP-biased glucagon-like peptide-1 (GLP-1) analog. Mol Metab. 2023 Sep;75:101762.
- [2]. WHO Drug Information, Vol. 35, No. 4, 2021. Geneva: World Health Organization; 2022.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA