

## Ecnoglutide

<b>Cat. No.:</b>	HY-P3366
<b>CAS No.:</b>	2459531-73-6
<b>Molecular Formula:</b>	C194H304N48O61
<b>Molecular Weight:</b>	4284.76
<b>Sequence:</b>	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- $\{\gamma$ -Glu)-C18 diacid)-Trp-Leu-Val-Arg-Gly-Arg-Gly
<b>Sequence Shortening:</b>	HVEGTFSTDVSSYLEEQAAREFIK-(AEEA-AEEA- $\{\gamma$ -Glu)-C18 diacid)-WLVGRGRG
<b>Target:</b>	GCGR
<b>Pathway:</b>	GPCR/G Protein
<b>Storage:</b>	Sealed storage, away from moisture Powder    -80°C    2 years -20°C    1 year

# Ecnoglutide

\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 25 mg/mL (5.83 mM; Need ultrasonic)  
H<sub>2</sub>O : 20 mg/mL (4.67 mM; ultrasonic and adjust pH to 12 with 1M NaOH)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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<sup>[1][2]</sup>.

#### In Vitro

Ecnoglutide induces cAMP but not GLP-1 receptor internalization (EC<sub>50</sub> = 0.018 nM)<sup>[2]</sup>.  
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<sup>[2]</sup>.  
Ecnoglutide (1 mg/kg, s.c., rats) shows the T<sub>1/2</sub> (h), T<sub>max</sub> (h), C<sub>max</sub> (nM), AUClast (h\*nM), MRT (h) values of 11.7, 18.0, 387.3, 16274.8, 25.4 respectively<sup>[2]</sup>.

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## REFERENCES

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- [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.**

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