

Liraglutide

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|----------------------|---|---------------|
| Cat. No.: | HY-P0014 | |
| CAS No.: | 204656-20-2 | |
| Molecular Formula: | C ₁₇₂ H ₂₆₅ N ₄₃ O ₅₁ | |
| Molecular Weight: | 3751.26 | |
| Sequence Shortening: | HAEGTFTSDVSSYL-[N6-[N-(1-oxohexadecyl)-L-γ-Etamy]-Glu]-GQAAKEFIAWLVRGRG | |
| Target: | Glucagon Receptor | |
| Pathway: | GPCR/G Protein | |
| Storage: | Protect from light | |
| | Powder | -80°C 2 years |
| | | -20°C 1 year |
| | * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) | |

N6-[N-(1-oxohexadecyl)-L-γ-glutamyl]
HAEGTFTSDV SSYLEGQAAKEFIAWLVRGR G

SOLVENT & SOLUBILITY

In Vitro

H₂O : 5 mg/mL (1.33 mM; ultrasonic and adjust pH to 8 with NaOH)

| Preparing Stock Solutions | Solvent Concentration | Mass | | |
|---------------------------|-----------------------|-----------|-----------|-----------|
| | | 1 mg | 5 mg | 10 mg |
| | 1 mM | 0.2666 mL | 1.3329 mL | 2.6658 mL |
| | 5 mM | --- | --- | --- |
| | 10 mM | --- | --- | --- |

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

BIOLOGICAL ACTIVITY

| | |
|---------------------------|---|
| Description | Liraglutide is a glucagon-like peptide-1 (GLP-1) receptor agonist used clinically to treat type 2 diabetes mellitus. |
| IC ₅₀ & Target | GLP-1 receptor ^[1] |
| In Vitro | Liraglutide binds to the same receptors as does the endogenous metabolic hormone GLP-1. Liraglutide is an injectable drug for the treatment of type 2 diabetes, also can be used to treat obesity in adults with some related comorbidity. Liraglutide activated AMPK/SREBP1 pathway in oxLDL-stimulated Raw264.7 cells ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

PROTOCOL

Cell Assay^[1]

Raw264.7 macrophage cells are cultured in Dulbecco's modified Eagle's medium supplemented with 10% fetal bovine

serum in a humidified 37°C incubator with 5% CO₂. The cells are incubated with oxLDL (50 µg/mL), Liraglutide (0.1, 0.5, 1 and 2 nM) or Exendin-3 (9-39) (1, 10 and 100 nM) alone, or in combination^[1].

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

CUSTOMER VALIDATION

- Int J Mol Sci. 2019 Apr 2;20(7). pii: E1629.
- J Biol Chem. 2021 May 19;100807.
- Front Pharmacol. 2020 Feb 28;11:136.
- Am J Physiol Renal Physiol. 2020 Sep 1;319(3):F458-F468.
- Exp Biol Med. 2019 Oct;244(14):1193-1201.

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REFERENCES

[1]. Wang Y, et al. Transformation of oligomers of lipidated peptide induced by change in pH. Mol Pharm. 2015 Feb 2;12(2):411-9.

[2]. Wang YG, et al. Liraglutide reduces oxidized LDL-induced oxidative stress and fatty degeneration in Raw 264.7 cells involving the AMPK/SREBP1 pathway. J Geriatr Cardiol. 2015 Jul;12(4):410-416.

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

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