GLP-2TZ
Research Applications

US Peptide Co

Mechanism of Action

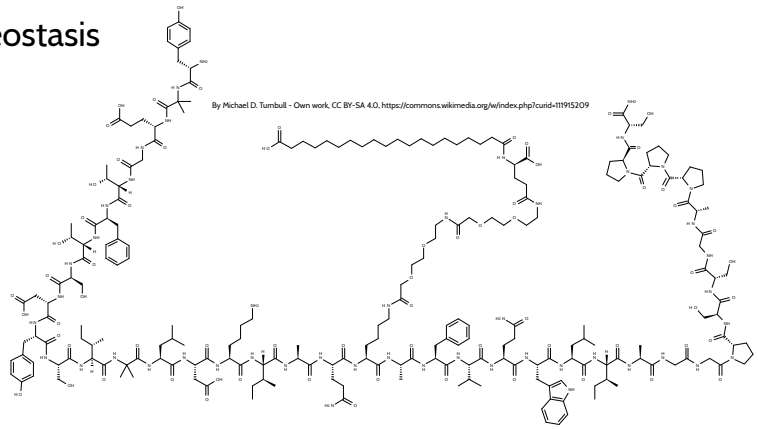
GLP-2TZ is a synthetic dual glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1) receptor agonist. In research models, it demonstrates high affinity for both GIP and GLP-1 receptors, with preferential activity at the GIP receptor. This dual-receptor engagement activates complementary signaling pathways that regulate insulin secretion, glucagon suppression, and satiety signals, making it valuable for studying integrated incretin biology and receptor signaling dynamics.

Research Applications

- Dual incretin receptor activation research
- Investigation of GIP/GLP-1 signaling crosstalk
- Models examining synergistic metabolic regulation
- Research on cellular pathways in glucose homeostasis

Molecular Profile

- Chemical Formula: $C_{225}H_{348}N_{48}O_{68}$
- Molecular Weight: 4,813.5 Da
- Structure: Dual GIP/GLP-1 receptor agonist with C20 fatty diacid chain



Laboratory Considerations

- Store lyophilized powder at -20°C
- Reconstituted solutions should be stored at 2-8°C
- Protect from light during storage and experimentation

References

1. Coskun T, et al. LY3298176, a novel dual GIP and GLP-1 receptor agonist for the treatment of type 2 diabetes mellitus: from discovery to clinical proof of concept. Mol Metab. 2018;18:3-14.
2. Frias JP, et al. Efficacy and safety of LY3298176, a novel dual GIP and GLP-1 receptor agonist, in patients with type 2 diabetes: a randomised, placebo-controlled and active comparator-controlled phase 2 trial. Lancet. 2018;392(10160):2180-2193.
3. Willard FS, et al. GLP-2TZ is an imbalanced and biased dual GIP and GLP-1 receptor agonist. JCI Insight. 2020;5(17):e140532.
4. Thomas MK, et al. Dual GIP and GLP-1 receptor agonist GLP-2TZ improves beta-cell function and insulin sensitivity in type 2 diabetes. J Clin Endocrinol Metab. 2021;106(2):388-396.