CJC 1295 DAC
Research Applications

US Peptide Co

Mechanism of Action

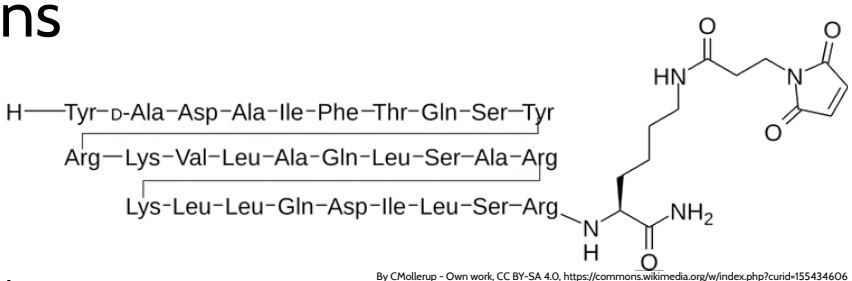
CJC-1295 DAC (Drug Affinity Complex) is a synthetic analog of growth hormone-releasing hormone (GHRH) with enhanced stability. The DAC modification allows for binding to serum albumin, significantly extending the peptide's half-life in research models. CJC-1295 DAC activates the GHRH receptor in the anterior pituitary, stimulating intracellular signaling cascades that regulate growth hormone synthesis and release. This sustained activation pattern makes it valuable for studying differences between continuous and pulsatile hormone signaling.

Molecular Profile

- Chemical Formula: $C_{152}H_{252}N_{44}O_{42}$
- Molecular Weight: 3,647.3 Da
- Sequence: Tyr-D-Ala-Asp-Ala-Ile-Phe-Thr-Gln-Ser-Tyr-Arg-Lys-Val-Leu-Ala-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Leu-Ser-Arg-Lys(Maleimidopropionyl)-NH_2

Laboratory Considerations

- Store lyophilized powder at -20°C
- Once reconstituted, store at 2-8°C
- Avoid repeated freeze-thaw cycles



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Research Applications

- Growth hormone secretion pathway research
- Investigation of extended half-life modifications in peptide pharmacokinetics
- Models examining pulsatile vs. continuous hormone signaling
- Research on GHRH receptor signaling mechanisms

References

1. Teichman SL, et al. Prolonged stimulation of growth hormone (GH) and insulin-like growth factor I secretion by CJC-1295, a long-acting analog of GH-releasing hormone, in healthy adults. J Clin Endocrinol Metab. 2006;91(3):799-805.
2. Alba M, et al. Once-daily administration of CJC-1295, a long-acting growth hormone-releasing hormone (GHRH) analog, normalizes growth in the GHRH knockout mouse. Am J Physiol Endocrinol Metab. 2006;291(6):E1290-E1294.
3. Jetté L, et al. Human growth hormone-releasing factor (hGRF)1-29-albumin bioconjugates activate the GRF receptor on the anterior pituitary in rats: identification of CJC-1295 as a long-lasting GRF analog. Endocrinology. 2005;146(7):3052-3058.
4. Ionescu M, et al. Pharmacokinetics and pharmacodynamic effects of a growth hormone-releasing hormone analog delivered subcutaneously in healthy volunteers. J Clin Endocrinol Metab. 2012;97(9):3371-3378.