

## Data Sheet

<b>Product Name:</b>	Calcitonin (salmon)
<b>Cat. No.:</b>	CS-5767
<b>CAS No.:</b>	47931-85-1
<b>Molecular Formula:</b>	C145H240N44O48S2
<b>Molecular Weight:</b>	3431.85
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Solubility:</b>	H <sub>2</sub> O : ≥ 50 mg/mL (14.57 mM)

CSNLSTCVLGLKLSQELHKLQTYPRNTGSGTP-NH<sub>2</sub>(Disulfide bridge: Cys1-Cys7)

### BIOLOGICAL ACTIVITY:

Calcitonin salmon, a calcium regulating hormone, is a dual-action **amylin** and **calcitonin receptor** agonist, could stimulate bone formation and inhibit bone resorption. Sequence: Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln- Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly-Thr-Pro-NH<sub>2</sub>(Disulfide bridge: Cys1-Cys7) . IC<sub>50</sub> & Target: Amylin, Calcitonin receptor [1]. **In Vivo:** Oral Calcitonin salmon treatment dose-dependently attenuates fasting and non-fasted hyperglycaemia during the intervention period. At the end of the study period, oral Calcitonin salmon treatment by dose decreases diabetic hyperglycaemia by ~9 mM and reduces HbA1c levels by 1.7%. Furthermore, a pronounced reduction in glucose excursions is dose-dependently observed for oral Calcitonin salmon treatment during oral glucose tolerance test. In addition, oral Calcitonin salmon treatment sustains hyperinsulinaemia and attenuates hyperglucagonaemia and hypersecretion of total glucagon-like peptide-1 predominantly in the basal state. Lastly, oral Calcitonin salmon treatment dose-dependently improves pancreatic beta-cell function and beta-cell area at study end<sup>[1]</sup>.

### PROTOCOL (Extracted from published papers and Only for reference)

#### Animal Administration: <sup>[1]</sup>Rats<sup>[1]</sup>

Male ZDF rats are treated with oral **Calcitonin salmon (sCT: 0.5, 1.0 or 2 mg/kg)** or oral vehicle twice daily from age 8 to 18 weeks. Zucker lean rats serve as control group. Fasting and non-fasted blood glucose, glycosylated haemoglobin (HbA1c) and levels of pancreas and incretin hormones are determined. Oral glucose tolerance test and i.p. glucose tolerance test were compared, and beta-cell area and function were evaluated<sup>[1]</sup>.

### References:

[1]. Feigh M, et al. Oral salmon calcitonin attenuates hyperglycaemia and preserves pancreatic beta-cell area and function in Zucker diabetic fatty rats. Br J Pharmacol. 2012 Sep;167(1):151-63.

### CAIndexNames:

L-Prolinamide, L-cysteinyl-L-seryl-L-asparaginyl-L-leucyl-L-seryl-L-threonyl-L-cysteinyl-L-valyl-L-leucylglycyl-L-lysyl-L-leucyl-L-seryl-L-glutaminy-L-α-glutamyl-L-leucyl-L-histidyl-L-lysyl-L-leucyl-L-glutaminy-L-threonyl-L-tyrosyl-L-prolyl-L-arginyl-L-threonyl-L-asparaginyl-L-threonylglycyl-L-serylglycyl-L-threonyl-, cyclic (1→7)-disulfide

### SMILES:

[CSNLSTCVLGLKLSQELHKLQTYPRNTGSGTP-NH<sub>2</sub>(Disulfide bridge: Cys1-Cys7)]

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

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