

Product Name: CRSP-1
CAS Number: 697327-12-1

Catalog No.: 3555 **Batch No.:** 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇₅H₂₉₄N₅₄O₄₉S₅
Batch Molecular Weight: 4098.88
Physical Appearance: White lyophilised solid
Net Peptide Content: 84%
Counter Ion: Trifluoroacetate
Solubility: Soluble to 0.50 mg/ml in 10% acetonitrile / water
Storage: Store at -20°C
Peptide Sequence: Ser-Cys-Asn-Thr-Ala-Thr-Cys-Met-Thr-His-Arg-Leu-Val-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Ser-Met-Val-Arg-Ser-Asn-Leu-Leu-Pro-Thr-Lys-Met-Gly-Phe-Lys-Val-Phe-Gly-NH₂

2. ANALYTICAL DATA

HPLC: Shows 95% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	1.00	1.00	Lys	2.00	1.99
Arg	3.00	2.93	Met	3.00	2.79
Asx	2.00	1.98	Phe	2.00	2.00
Cys			Pro	1.00	1.00
Glx			Ser	5.00	4.96
Gly	4.00	4.03	Thr	4.00	3.99
His	1.00	1.07	Trp		
Ile			Tyr		
Leu	5.00	5.02	Val	3.00	2.89

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Endogenous central calcitonin (CT) receptor agonist that stimulates cAMP formation at a potency 350-fold greater than CT (ED₅₀ values are 0.2 and 71 nM respectively). Displays no activity at calcitonin-gene related peptide (CGRP) and adrenomedullin receptors. Inhibits formation of multinuclear osteoclasts with similar efficacy to CT in vitro. Suppresses food intake and increases body temperature in free-feeding rats, and significantly decreases plasma calcium levels in vivo.

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Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.50 mg/ml in 10% acetonitrile / water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 84% (Remaining weight made up of counterions and residual water).

Counter Ion: Trifluoroacetate

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Katafuchi et al (2003) Calcitonin receptor-stimulating peptide, a new member of the calcitonin gene-related peptide family. Its isolation from porcine brain, structure, tissue distribution, and biological activity. *J.Biol.Chem.* **278** 12046. PMID: 12556539.

Sawada et al (2006) Central effects of calcitonin receptor-stimulating peptide-1 on energy homeostasis in rats. *Endocrinology* **147** 2043. PMID: 16410305.

Notoya et al (2007) A novel member of the calcitonin gene-related peptide family, calcitonin receptor-stimulating peptide, inhibits the formation and activity of osteoclasts. *Eur.J.Pharmacol.* **560** 234. PMID: 17328890.

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