

Certificate of Analysis

Product Name: CART (62-76) (rat, human)

Catalog No.: 3339

Batch No.: 1

CAS Number: 210978-19-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₆₄ H ₉₉ N ₁₇ O ₂₃ S ₃
Batch Molecular Weight:	1570.77
Physical Appearance:	White lyophilised solid
Net Peptide Content:	90%
Counter Ion:	Trifluoroacetate
Solubility:	Soluble to 1 mg/ml in 20% acetonitrile / water
Storage:	Store at -20°C
Peptide Sequence:	Tyr-Gly-Gln-Val-Pro-Met-Cys-Asp-Ala-Gly- Glu-Gln-Cys-Ala-Val

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		2.00	1.92	Lys			
Arg				Met	1.00		1.09
Asx	1.00		1.02	Phe			
Cys				Pro	1.00		0.97
Glx	3.00		2.99	Ser			
Gly	2.00		1.99	Thr			
His				Trp			
Ile				Tyr	1.00		1.06
Leu				Val	2.00		1.98

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

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CAS Number: 210978-19-1

Description:

Cocaine- and amphetamine-regulated transcript (CART) peptide fragment that inhibits food intake. Attenuates NPY-induced feeding and decreases food intake in food-restricted goldfish, and induces anxiogenic-like effects in elevated plus-maze test in rats. Modulates the activity of striatal noradrenergic, and corticostriatal and hypothalamic serotonergic systems, with no major effect on dopaminergic pathways in rat brain.

Physical and Chemical Properties:Batch Molecular Formula: C₆₄H₉₉N₁₇O₂₃S₃

Batch Molecular Weight: 1570.77

Physical Appearance: White lyophilised solid

Peptide Sequence:Tyr-Gly-Gln-Val-Pro-Met-Cys-Asp-Ala-Gly-
Glu-Gln-Cys-Ala-Val**Storage:** Store at -20°C**Solubility & Usage Info:**

Soluble to 1 mg/ml in 20% 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: 90% (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:

Volkoff and Peter (2000) Effects of CART peptides on food consumption, feeding and associated behaviors in the goldfish, *Carassius auratus*: actions on neuropeptide Y- and orexin A-induced feeding. *Brain Res.* **887** 125. PMID: 11134597.

Vaarmann and Kask (2001) Cocaine and amphetamine-regulated transcript peptide (CART62-76)-induced changes in regional monoamine levels in rat brain. *Neuropeptides* **35** 292. PMID: 12030814.

Colombo et al (2003) Effects of ghrelin and other neuropeptides (CART, MCH, orexin A and B, and GLP-1) on release of insulin from isolated rat islets. *Pancreas* **27** 161. PMID: 12883265.

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