

Certificate of Analysis

Product Name: Cortistatin 14

Catalog No.: 3374

Batch No.: 23

CAS Number: 193829-96-8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈₁H₁₁₃N₁₉O₁₉S₂
Batch Molecular Weight: 1721.03
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 0.70 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Pro-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-
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Ser-Ser-Cys-Lys

2. ANALYTICAL DATA

HPLC: Shows 96.3 % purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	3.00	3.05
Arg			Met		
Asx	1.00	0.91	Phe	3.00	3.00
Cys	2.00	0.57	Pro	1.00	1.05
Glx			Ser	2.00	1.41
Gly			Thr	1.00	0.87
His			Trp	1.00	0.05
Ile			Tyr		
Leu			Val		

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

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Description:

Cortistatin 14 is an endogenous neuropeptide, mainly expressed in the cortex and hippocampus, that has structural and functional similarities to somatostatin-14. Cortistatin 14 displays potency at all somatostatin receptors (sst₁ - sst₅) and prevents somatostatin-14 binding (IC₅₀ values are 0.09, 0.2, 0.3, 0.3 and 5 nM at sst₂, sst₄, sst₃, sst₅ and sst₁ receptors, respectively). Also a potent MRGPRX2 agonist (EC₅₀ = 25 nM in HEK293 cells) and binds to the growth hormone secretagog receptor (GHS-R1a). Exhibits neuronal depressant and sleep-modulating properties in vivo. Please see product specific page on www.tocris.com for full description.


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Pro-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-

 Ser-Ser-Cys-Lys

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.70 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

Counter Ion: TFA

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 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:

Solinski et al (2014) Pharmacology and signaling of MAS-related G protein-coupled receptors. *Pharmacol.Rev.* **66** 570. PMID: 24867890.

Robas et al (2003) MrgX2 is a high potency cortistatin receptor expressed in dorsal root ganglion. *J.Biol.Chem.* **278** 44400. PMID: 12915402.

Deghenghi et al (2001) Cortistatin, but not somatostatin, binds to GH secretagogue (GHS) receptors of the human pituitary gland. *J.Endocrinol.Invest.* **24** RC1. PMID: 11227737.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956