

Certificate of Analysis

www.tocris.com

Product Name: MCL 0020
CAS Number: 475498-26-1

Catalog No.: 3438

Batch No.: 4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₄H₃₉N₇O₄
Batch Molecular Weight: 609.73
Physical Appearance: White lyophilised solid
Net Peptide Content: 72%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in 25% ethanol / water
Storage: Store at -20°C
Peptide Sequence: Ac-D-2-Nal-Arg-2-Nal-NH₂

2. ANALYTICAL DATA

HPLC: Shows 98% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala			Lys		
Arg	1.00	1.00	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser		
Gly			Thr		
His			Trp		
Ile			Tyr		
Leu			Val		

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

Product Name: MCL 0020
CAS Number: 475498-26-1

Catalog No.: 3438 **Batch No.:** 4

Description:

Potent and selective melanocortin MC₄ receptor antagonist (IC₅₀ values are 11.63, 1115 and > 10 000 nM at MC₄, MC₃ and MC₁ receptors respectively). Significantly reverses stress-induced anorexia but has no effect on food intake in free-feeding rats. Exhibits anxiolytic-like activity in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₃₄H₃₉N₇O₄
Batch Molecular Weight: 609.73
Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-D-2-Nal-Arg-2-Nal-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in 25% ethanol / 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: 72% (Remaining weight made up of counterions and residual water).

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 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:

Chaki et al (2003) Involvement of the melanocortin MC₄ receptor in stress-related behavior in rodents. *Eur.J.Pharmacol.* **474** 95. PMID: 12909200.

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

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