TOCRIS a bio-techne brand

Print Date: Nov 16th 2018

Certificate of Analysis

www.tocris.com

Product Name: **LF 11** **Catalog No.: 4421** **Batch No.: 1**

CAS Number: 832729-13-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{69}H_{112}N_{26}O_{14}$
Batch Molecular Weight:	1529.81
Physical Appearance:	White lyophilised solid
Net Peptide Content:	72%
Counter Ion:	TFA
Solubility:	Soluble to 2 mg/ml in 20% acetonitrile / water
Storage:	Store at -20°C
Peptide Sequence:	Phe-Gln-Trp-Gln-Arg-Asn-Ile-Arg-Lys-Val-Arg-NH_2

2. ANALYTICAL DATA

HPLC:	Shows 97% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	1.00	0.99
Arg	3.00	3.04	Met		
Asx	1.00	0.95	Phe	1.00	1.03
Cys			Pro		
Glx	2.00	1.92	Ser		
Gly			Thr		
His			Trp		
Ile	1.00	1.09	Tyr		
Leu			Val	1.00	0.98

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

Product Name: **LF 11** **Catalog No.: 4421** **Batch No.: 1**

CAS Number: 832729-13-2

Description:

Peptide based on the lipopolysaccharide (LPS)-binding region of human lactoferricin. Neutralizes LPS; displays antimicrobial activity against Gram-negative and Gram-positive bacteria. Analog lauryl-LF 11 (Cat. No. 4422) available.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{69}H_{112}N_{26}O_{14}$

Batch Molecular Weight: 1529.81

Physical Appearance: White lyophilised solid

Peptide Sequence:

Phe-Gln-Trp-Gln-Arg-Asn-Ile-Arg-Lys-Val-Arg-NH_2

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 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: 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 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:

Sanchez-Gomez *et al* (2008) Comparative analysis of selected methods for the assessment of antimicrobial and membrane-permeabilizing activity: a case study for lactoferricin derived peptides. BMC Mirobiol. ***11*** 196. PMID: 19014450.

Andra *et al* (2005) Enhancement of endotoxin neutralization by coupling of a C12-alkyl chain to a lactoferricin-derived peptide. Biochem.J. ***385*** 135. PMID: 15344905.

Japelj *et al* (2005) Structural origin of endotoxin neutralization and antimicrobial activity of a lactoferrin-based peptide. J.Biol.Chem. ***280*** 16955. PMID: 15687491.