

# Certificate of Analysis

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**Product Name:** R18  
**CAS Number:** 211364-78-2

**Catalog No.:** 2144 **Batch No.:** 9

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>101</sub>H<sub>157</sub>N<sub>27</sub>O<sub>29</sub>S<sub>3</sub>  
**Batch Molecular Weight:** 2309.69  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Pro-His-Cys-Val-Pro-Arg-Asp-Leu-Ser-Trp-Leu-Asp-Leu-Glu-Ala-Asn-Met-Cys-Leu-Pro

## 2. ANALYTICAL DATA

**HPLC:** Shows 94.4% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala	1.00	1.02	Lys		
Arg	1.00	1.02	Met	1.00	1.03
Asx	3.00	3.09	Phe		
Cys	2.00	Not Detected	Pro	3.00	2.95
Glx	1.00	1.02	Ser	1.00	0.98
Gly			Thr		
His	1.00	0.97	Trp	1.00	Not Detected
Ile			Tyr		
Leu	4.00	3.93	Val	1.00	0.97

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](http://www.tocris.com/distributors)  
Tel: +1 612 379 2956

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**Catalog No.:** 2144

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CAS Number: 211364-78-2

**Description:**

R18 is an antagonist of 14.3.3 proteins ( $K_D \approx 80$  nM). Competitively inhibits 14.3.3-ligand interactions without requiring phosphorylation. Blocks the ability of 14.3.3 to bind to target proteins such as Raf-1, Bad, ASK1 and exoenzyme S.

**Physical and Chemical Properties:**

Batch Molecular Formula:  $C_{101}H_{157}N_{27}O_{29}S_3$

Batch Molecular Weight: 2309.69

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Pro-His-Cys-Val-Pro-Arg-Asp-Leu-Ser-Trp-  
Leu-Asp-Leu-Glu-Ala-Asn-Met-Cys-Leu-Pro

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This peptide is soluble to 1mM in 67% Acetic Acid (0.5mg/200µl), alternatively dissolve the peptide in a basic solvent such as a weak ammonia solution or water adjusted to a more basic pH (e.g pH 8-9) 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 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:**

**Masters *et al*** (2002) Survival-promoting functions of 14.3.3 proteins. *Biochem.Soc.Transactions* **30** 360.

**Masters and Fu** (2001) 14.3.3 proteins mediate an essential anti-apoptotic signal. *J.Biol.Chem.* **276** 45193. PMID: 11577088.

**Wang *et al*** (1999) Isolation of high-affinity peptide antagonists of 14.3.3 proteins by phage display. *Biochemistry* **38** 12499. PMID: 10493820.

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