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TOCRIS

Print Date: Feb 23rd 2024

Certificate of Analysis

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Product Name: **R18** **Catalog No.: 2144** **Batch No.: 9**

CAS Number: 211364-78-2

1. 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

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 96.6% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	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	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	Detected
Ile			Tyr		
Leu	4.00	3.93	Val	1.00	0.97

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Product Name: R18 **Catalog No.:** 2144 9

CAS Number: 211364-78-2

Description:

R18 is an antagonist of 14.3.3 proteins (K_D ≈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.

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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 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.