

Certificate of Analysis

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Product Name: Hexa-D-arginine

Catalog No.: 4711

Batch No.: 8

CAS Number: 673202-67-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₆H₇₅N₂₅O₆
Batch Molecular Weight: 954.16
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-NH₂

2. ANALYTICAL DATA

HPLC: Shows 99% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg	6.00		6.00	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

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Catalog No.: 4711

Batch No.: 8

CAS Number: 673202-67-0

Description:

Hexa-D-arginine is an inhibitor of furin (K_i values are 0.106, 0.58 and 13.2 μM for furin, PACE4 and PC1 respectively).

Physical and Chemical Properties:

Batch Molecular Formula: C₃₆H₇₅N₂₅O₆

Batch Molecular Weight: 954.16

Physical Appearance: White lyophilised solid

Peptide Sequence:

D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in 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.

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:

Cheng et al (2020) Furin inhibitors block SARS-CoV-2 spike protein cleavage to suppress virus production and cytopathic effects. *Cell Rep.* **33**. PMID: 33007239.

Yuan et al (2012) Hexa-D-arginine treatment increases 7B2.PC2 activity in hyp-mouse osteoblasts and rescues the HYP phenotype. *J.Bone Miner.Res.* **28** 56. PMID: 22886699.

Cameron et al (2000) Polyarginines are potent furin inhibitors. *J.Biol.Chem.* **275** 36741. PMID: 10958789.

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