

Product Name: RGDS peptide

Catalog No.: 3498

Batch No.: 6

CAS Number: 91037-65-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₂₇N₇O₈
Batch Molecular Weight: 433.42
Physical Appearance: White lyophilised solid
Net Peptide Content: 75.6%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Arg-Gly-Asp-Ser

2. ANALYTICAL DATA

HPLC: Shows 96.9% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg	1.00		1.11	Met			
Asx	1.00		1.05	Phe			
Cys				Pro			
Glx				Ser	1.00		0.86
Gly	1.00		1.00	Thr			
His				Trp			
Ile				Tyr			
Leu				Val			

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

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Description:

Integrin binding sequence that inhibits integrin receptor function. Decreases systemic inflammation via inhibition of collagen-triggered activation of leukocytes and attenuates expression of inflammatory cytokines, iNOS and MMP-9. Promotes cell attachment and abrogates apoptosis via the mitochondrial pathway in osteoblasts in vitro.

Physical and Chemical Properties:

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Batch Molecular Weight: 433.42

Physical Appearance: White lyophilised solid

Peptide Sequence:

Arg-Gly-Asp-Ser

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 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.

Net Peptide Content: 75.6% (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:

Grigoriou *et al* (2005) Apoptosis and survival of osteoblast-like cells are regulated by surface attachment. *J.Biol.Chem.* **280** 1733. PMID: 15522882.

Moon *et al* (2009) Synthetic RGDS peptide attenuates lipopolysaccharide-induced pulmonary inflammation by inhibiting integrin signaled MAP kinase pathways. *Respir.Res.* **10** 18. PMID: 19272161.

Droppelmann *et al* (2009) Matrix metalloproteinase-2-deficient fibroblasts exhibit an alteration in the fibrotic response to CTGF/CCN2 due to an increase in the levels of endogenous fibronectin. *J.Biol.Chem.* **284** 13551. PMID: 19276073.

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