Product Datasheet

Technical Data

Formula	$C_{12}H_{22}N_6O_6$					
Molecular Weight	346.34	**CAS No.**	99896-85-2			
Solubility (25°C)*	In vitro	Water	69 mg/mL (199.22 mM)			
		DMSO	7 mg/mL (20.21 mM)			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Biological Activity

Description	RGD (Arg-Gly-Asp) Peptides is a cell adhesion motif which can mimic cell adhesion proteins and bind to integrins.
Targets	Integrin [1]
In vitro	The RGD sequence is the cell attachment site of a large number of adhesive extracellular matrix, blood, and cell surface proteins, and nearly half of the over 20 known integrins recognize this sequence in their adhesion protein ligands. The RGD peptides and mimics can be used to probe integrin functions in various biological systems. Drug design based on the RGD structure may provide new treatments for diseases such as thrombosis, osteoporosis, and cancer. [1] RGD peptide acts as an inhibitor of integrin-ligand interactions and can induce apoptosis in the absence of signals and integrin-mediated cell clustering. Research demonstrates that RGD peptides promote apoptosis through activation of conformation changes that enhance pro-caspase-3 activation and autoprocessing. [2] The RGD peptide can serve as a cell adhesion site of extracellular matrix, cell surface proteins, and integrins. [3] In addition, RGD peptide can inhibit ACK-2 activation through cell adhesion. [4]

Protocol (from reference)

Cell Assay:[5]

- **Cell lines**
  HLE cell line
- **Concentrations**
  0.1, 0.3, 1.0 and 2.0 mg/ml
- **Incubation Time**
  90 min
- **Method**
  The cells were seeded at approximately 2.6×10^4 /well on each ECM-coated 24-well plate in the medium containing the monotype of GRGDSP RGD peptide at 0 (control), 0.1, 0.3, 1.0 and 2.0 mg/ml. After 90 min of incubation, the floating cells were removed by washing twice with Ca 2+ -Mg 2+ -free phosphate-buffered saline. Then the attached cells were dissociated with trypsin-EDTA solution. The number of cells attached at each concentration of peptide was counted using a hemocytometer.

References

https://pubmed.ncbi.nlm.nih.gov/8970741/ https://pubmed.ncbi.nlm.nih.gov/10028971/ https://pubmed.ncbi.nlm.nih.gov/17708932/

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RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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