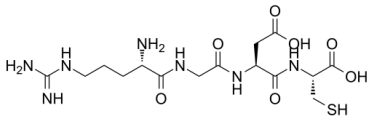
Data Sheet

Product Name:	Arg-Gly-Asp-Cys
Cat. No.:	CS-7063
CAS No.:	109292-46-8
Molecular Formula:	C15H27N7O7S
Molecular Weight:	449.48
Target:	Others
Pathway:	Others
Solubility:	H2O : ≥ 50 mg/mL (111.24 mM)



BIOLOGICAL ACTIVITY:

Arg-Gly-Asp-Cys is the binding motif of fibronectin to cell adhesion molecules, and can inhibit platelet aggregation and fibrinogen binding. Sequence: Arg-Gly-Asp-Cys. **In Vitro:** RGDC immobilizes peptide onto DAH-CMTMC is found to be about 15.3 μg/mg of chitosan derivative by amino acid analysis (AAA). RGDC-functionalized chitosan may lead to enhanced wound healing (viability >140%). RGDC-functionalizes chitosan derivatives exhibit in vitro wound healing properties by enhancing fibroblast proliferation and adhesion. RGDC-DAH-CMTMC favors cell growth and an increase in cellular proliferation compared to the control cells[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]Human precursor dermal fibroblasts (HDF, human dermal progenitor cells, 12 week male donor) are use in the assay. WST-1 assay is used to assess the viability of HDF when incubated with chitosan derivatives. For this study, HDF are seeded in a 96-well plate at a density of 6×10^3 cells/cm^2. To each well, 100 μL of cell suspension is added and incubated for 48 h in order to allow cell attachment. DMEM is then replaced by 100 μL of CMTMC and RGDC-DAH-CMTMC suspension at concentrations of 0.25 mg/mL, 0.5 mg/mL and 1 mg/mL, respectively. Cell viability under polymer incubation is evaluated during 2, 4 and 7 days. SDS (1%) is used as negative control. The polymer solution is changed every 3 days. 100 μL of WST-1 (1:10 dilution in DMEM) are added in each well after removing the polymer suspension and incubated for 0.5-2 h. Absorbance is recorded with a BioTek Microplate reader at two different wavelengths (450 and 690 nm). The viability is presented as percentage compared to the positive control group (cells in DMEM supplemented with 10% fetal calf serum). All experiments are carried out in triplicates.

References:

[1]. Patrulea V, et al. Peptide-decorated chitosan derivatives enhance fibroblast adhesion and proliferation in wound healing. Carbohydr Polym. 2016 May 20;142:114-23.

CAIndexNames:

L-Cysteine, L-arginylglycyl-L-α-aspartyl-

SMILES:

O=C(NCC(N[C@@H](CC(O)=O)C(N[C@@H](CS)C(O)=O)=O)=O)[C@H](CCCNC(N)=N)N

Caution: Product has not been fully validated for medical applications. For research use only.

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