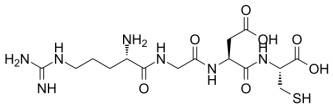
Arg-Gly-Asp-Cys

Cat. No.:	HY-P0314		
CAS No.:	109292-46-8		
Molecular Formula:	$C_{15}H_{27}N_7O_7S$		
Molecular Weight:	449.48		
Sequence Shortening:	RGDC		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-80°C	2 years
		-20°C	1 year
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Arg-Gly-Asp-Cys is the binding motif of fibronectin to cell adhesion molecules, and can inhibit platelet aggregation and fibrinogen binding.
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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

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. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.

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

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