Product Data Sheet

Product Name: Dermaseptin TFA
Cat. No.: GC60131

Chemical Properties

Cas. No.	646451-06-1		
Formula	$C_{154}H_{258}N_{43}F_3O_{46}S_2$	M.Wt	3569.12
Solubility	DMSO : 100 mg/mL (Need ultrasonic)	Storage	-20°C, protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Dermaseptin TFA		

Background

Dermaseptin TFA, a peptide isolated from frog skin, exhibits potent antimicrobial activity against bacteria, fungi, and protozoa at micromolar concentration[1].

Dermaseptin TFA is a water-soluble, thermostable, and nonhemolytic peptide endowed with highly potent antimicrobial activity against pathogenic fungi at micromolar concentration. Circular dichroism spectra of Dermaseptin TFA in hydrophobic media indicated 80% alpha-helical conformation, and predictions of secondary structure suggested that Dermaseptin TFA can be configured as an amphiphatic alpha-helix spanning over residues 1-27, a structure that perturbs membrane functions regulating water flux[1]. Dermaseptin TFA exerts a lytic action upon bacteria, protozoa, yeasts, and filamentous fungi at micromolar concentrations. Molecular elements responsible for the exceptional antimicrobial potency of Dermaseptin TFA are to be traced to the NH2-terminal alpha-helical amphipathic segment spanning residues 1-18 of the molecule[1].Dermaseptin TFA (5-100 μg/ml; 48 hours) inhibits by 100% the proliferation of most microorganisms tested, including Gram-positive or Gram-negative bacteria, parasites, yeasts, and filamentous fungi, at micromolar concentrations[2]. Dermaseptin TFA (5-100 μg/ml; 48 hours) does not inhibit the proliferation of human KJ3 cells after a 48 h incubation, and Dermaseptin TFA treatment for 1 h does not permeate guinea pig

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lymphocytes up to the highest concentration assayed (200 μg/ml). Hemolysis of rabbit erythrocytes occurrs after 1 h of treatment at doses above 200 μg/ml, with 50% hemolysis at 350 μg/ml[2]. Dermaseptin TFA has antimicrobial activities and is against Aeromonas cauiae, Pseudomonas aeroginusa, Escherichia coli, Enterococcus faecalis, L. mezicana (NFα strain) and Microsporum canis (IP1194) with MIC values of 50 μg/ml; 100 μg/ml; 25 μg/ml; 15 μg/ml; and 50 μg/ml, respectively[2].

[1]. Mor A, et al. Isolation, amino acid sequence, and synthesis of Dermaseptin TFA, a novel antimicrobial peptide of amphibian skin. Biochemistry. 1991 Sep 10;30(36):8824-30. [2]. Mor A, et al. The NH2-terminal alpha-helical domain 1-18 of Dermaseptin TFA is responsible for antimicrobial activity. J Biol Chem. 1994 Jan 21;269(3):1934-9.

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