Product Data Sheet

Product Name:	type II collagen fragment
Cat. No.:	GP10084

Chemical Properties

Cas. No.			
SMILES	NCC(NC(CCC(O)=O)C(N1CCCC1C(NCC(NC(C(C)CC)C(NC(C)C(NCC(NC(CC2=CC=CC=C2)C(NC(CCCCN)C(NCC(NC(CCC(O)=O)C(NC(CC		
Formula	$C_{65}H_{102}N_{18}O_{21}$	M.Wt	
Solubility	≥ 147.1mg/mL in DMSO	Storage	
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		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	type II collagen fragment		

Background

Type II collagen is composed of a triple helix of three identical α chains. These molecules associate to form a fibril that is stabilized by intermolecular crosslinks[1]. Damage to the fibrillar meshwork, made up of primarily type II collagen (z 90–95%), may be a critical event in the pathology of many arthritides, due in part to the very slow rate of collagen turnover within the cartilage[2].

Type II collagen and aggrecan (a large, aggregating proteoglycan) are the two major components of the extracellular matrix of cartilage. The collagen, which is present in a fibrillar form, provides tensile strength whereas the aggrecan is responsible for compressive stiffness of cartilage[3-5]. Early damage to type II collagen is predominantly pericellular/ territorial suggests that in the majority of cases collagen damage was mediated by the chondrocyte.

References:
1.Eyre, D.R. 1987. Collagen cross-linking amino acids. Methods Enzymol. 144:115–139.
2.McAnulty, R.J., and G.J. Laurent. 1990. In vivo measurement of collagen metabolism in cartilage and bone. In Methods in Cartilage Research. A. Maroudas and K. Kuettner, editors. Academic Press Inc., San Diego, CA. 140–142.
3.Kempson, G. 1980. The mechanical properties ofarticular cartilage. In The Joints and Synovial Fluid. Volume 2. L. Sokoloff, editor. Academic Press Inc.,New York. 238-239.
4.Schmidt, M. B., V. C. Mow, L. E. Chun, and D. R. Eyre. 1990. Effects of proteoglycan extraction on the tensile behaviour ofarticular cartilage. J. Orthop. Res. 8:353-363.
5.Poole, A. R. 1993. Cartilage in health and disease. In Arthritis and Allied Conditions: A Textbook of Rheumatology. D. J. McCarty and W. J. Koopman, editors. Lea & Febiger, Philadelphia. 279-333.

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