



LKT Laboratories, Inc.

Chondroitin Sulfate, chicken

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Product Information

Product ID C2961

CAS No. 9082-07-9

Chemical Name

Synonym Chondroitinsulfuric acid, Chonsurid, Structum, Chondroitin sulfate sodium

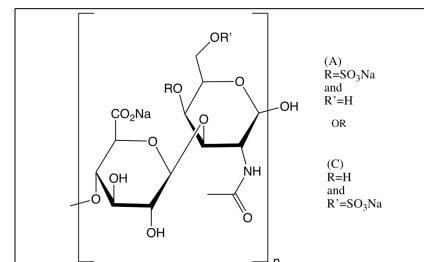
Formula $-(C_{13}H_{19}NO_{15}SNa_2)_n^-$

Formula Wt. ~50,000 Da

Melting Point 190-194°C

Purity ≥90%

Solubility Soluble in water.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
C2961	5 g	\$59.20
C2961	25 g	\$227.70

Store Temp 4°C

Ship Temp Ambient

Description Chondroitin sulfate (CS) is a polyanionic sulfated glycosaminoglycan that displays anti-arthritic, antioxidative, and anti-inflammatory activities. CS is an endogenous component of the extracellular matrix of connective tissues and is responsible for their resistance and elasticity. CS is often used as a dietary supplement, although its oral bioavailability is quite low (10-20%). In vivo, CS decreases synovitis and levels of IL-6, TNF-α, IL-1β, and myeloperoxidase. CS may act on toll-like receptor 4 (TLR4), preventing activation of NF-κB and inhibiting TNF receptor association factor 6 (TRAF6). In cellular and animal models, CS increases synthesis of collagen, proteoglycan, and hyaluronic acid; it also downregulates expression of matrix metalloproteinases 1, 3, and 13. In vitro, CS increases levels of glutathione and superoxide dismutase and inhibits activation of caspases 3 and 7, decreasing levels of ROS.

- References** Henrotin Y, Mathy M, Sanchez C, et al. Chondroitin sulfate in the treatment of osteoarthritis: from in vitro studies to clinical recommendations. *Ther Adv Musculoskelet Dis*. 2010 Dec;2(6):335-48. PMID: 22870459.
- Campo GM, Avenoso A, Campo S, et al. Glycosaminoglycans modulate inflammation and apoptosis in LPS-treated chondrocytes. *J Cell Biochem*. 2009 Jan 1;106(1):83-92. PMID: 19009563.
- Campo GM, Avenoso A, Campo S, et al. Chondroitin-4-sulphate inhibits NF-κB translocation and caspase activation in collagen-induced arthritis in mice. *Osteoarthritis Cartilage*. 2008 Dec;16(12):1474-83. PMID: 18501644.
- Chou MM, Vergnolle N, McDougall JJ, et al. Effects of chondroitin and glucosamine sulfate in a dietary bar formulation on inflammation, interleukin-1β, matrix metalloproteinase-9, and cartilage damage in arthritis. *Exp Biol Med (Maywood)*. 2005 Apr;230(4):255-62. PMID: 15792947.
- Cho SY, Sim JS, Jeong CS, et al. Effects of low molecular weight chondroitin sulfate on type II collagen-induced arthritis in DBA/1J mice. *Biol Pharm Bull*. 2004 Jan;27(1):47-51. PMID: 14709897.
- Campo GM, Avenoso A, Campo S, et al. Efficacy of treatment with glycosaminoglycans on experimental collagen-induced arthritis in rats. *Arthritis Res Ther*. 2003;5(3):R122-31. PMID: 12723984.
- Omata T, Itokazu Y, Inoue N, et al. Effects of chondroitin sulfate-C on articular cartilage destruction in murine collagen-

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.