SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

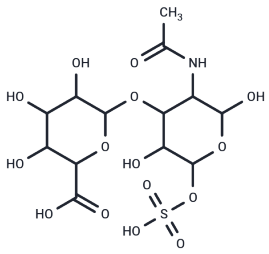
linkedin.com/company/szaboscandic

Data Sheet (Cat.No.T2980)

TargetMol

Chondroitin sulfate

Chemical Properties



CAS No. : 9007-28-7

Formula: (C14H21NO14S)n

Molecular Weight:

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Chondroitin sulfate (Chonsurid) is extracted from shark bone;Store the product in sealed, cool and dry condition
Targets(IC50)	MMP,Others,Endogenous Metabolite,NO Synthase
In vitro	Chondroitin sulfate, a sulfated glycosaminoglycan comprising linear polysaccharides with repeating disaccharide units of uronic acid and N-acetylhexosamine, plays a critical role in the extracellular matrix of various connective tissues, including bone, cartilage, skin, ligaments, and tendons. It has been observed that various pathogens such as parasites, bacteria, and viruses exploit chondroitin sulfate on the cell surface for host cell attachment and infection. Beyond its natural occurrence, chondroitin sulfate exhibits multiple beneficial properties, including anti-inflammatory effects, promotion of type II collagen and proteoglycan production, reduction in bone resorption, and support for a positive anabolic/catabolic balance in chondrocytes. In vitro studies have employed a broad spectrum of chondroitin sulfate concentrations, typically not exceeding 200 mg/mL, demonstrating its capability to diminish chondrocyte vulnerability to apoptosis triggered by single nucleotide polymorphism at 200 mg/mL concentration. Moreover, it significantly lowers the levels of inflammation mediators, the apoptotic process, and inflammatory cytokine, iNOS, and MMPs production.
In vivo	The high content of chondroitin sulfate in aggrecan significantly contributes to cartilage's ability to withstand tensile stresses under various loading conditions, endowing the tissue with enhanced resistance and elasticity. Research indicates that chondroitin sulfate plays a role in mitigating the progression of structural changes in joint tissues, thereby supporting its use in treating osteoarthritis patients. Administered orally in dosages between 800 to 1200 mg/day, chondroitin sulfate is quickly absorbed by the gastrointestinal tract. Once absorbed, it enters the bloodstream as 10% unchanged chondroitin sulfate and 90% as depolymerized low-molecular-weight derivatives.
Cell Research	Chondrocytes are cultured into six-well culture plates. 12 hours after plating, the culture medium is replaced with 2.0 mL of fresh medium containing LPS at a concentration of 50 mg/mL. 4 hours later, HA, Chondroitin sulfate, HS, keratan sulphate and DS are added separately to each of the wells at concentrations of 0.5 and 1.0 mg/mL. The number of viable chondrocytes is then quantified by trypan blue dye exclusion test from several randomly chosen areas of each well[4].

Solubility Information

Solubility	DMSO: Slightly soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Zheng K, Ma Y, Chiu C, et al. Co-culture pellet of human Wharton's jelly mesenchymal stem cells and rat costal chondrocytes as a candidate for articular cartilage regeneration: in vitro and in vivo study. Stem Cell Research &