




Rabbit Anti-ACAN antibody

SL1223R

Product Name:	ACAN
Chinese Name:	软骨蛋白聚糖抗体
Alias:	Aggrecan; Aggrecan core protein; Cartilage-specific proteoglycan core protein; CSPCP; Chondroitin sulfate proteoglycan core protein 1; Chondroitin sulfate proteoglycan 1; Aggrecan core protein 2; AGC1; CSPG1; MSK16; PGCA_HUMAN.
文献引用 	<p>Specific References(6) SL1223R has been referenced in 6 publications.</p> <p>[IF=7.60]Lei, Ming, et al. "Mesenchymal stem cell characteristics of dental pulp and periodontal ligament stem cells after< i> in vivo transplantation." Biomaterials (2014).WB;Human. PubMed:24824581</p> <p>[IF=4.46]Shi, Yang, et al. "Hypoxia combined with spheroid culture improves cartilage specific function in chondrocytes." Integrative Biology (2015).Rat. PubMed:25614382</p> <p>[IF=1.27]Liu, Yong, et al. "Lentivirus-mediated TGF-β3, CTGF and TIMP1 gene transduction as a gene therapy for intervertebral disc degeneration in an in vivo rabbit model." Experimental and Therapeutic Medicine.WB;Rabbit. PubMed:27073456</p> <p>[IF=1.80]Zhao, Yangfei, et al. "Effect of Choline on the Composition and Degradation Enzyme of Extracellular Matrix of Mice Chondrocytes Exposed to Fluoride." Biological Trace Element Research (2016): 1-7.WB;Mouse. PubMed:27368532</p> <p>[IF=2.69]Hu, Ming-Hsiao, et al. "Optimization of Puncture Injury to Rat Caudal Disc</p>

	<p>for Mimicking Early Degeneration of Intervertebral Disc." Journal of Orthopaedic Research (2017).IHC-P;Rat.</p> <p style="text-align: center;">PubMed:28594131</p> <p>[IF=2.15] Xu, Xilin, et al. "Danshen attenuates osteoarthritis-related cartilage degeneration through inhibition of NF-κB signaling pathway in vivo and in vitro." Biochemistry and Cell Biology (2017).WB;Rabbit.</p> <p style="text-align: center;">PubMed:0</p>
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,
Applications:	<p>ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair)</p> <p>not yet tested in other applications.</p> <p>optimal dilutions/concentrations should be determined by the end user.</p>
Molecular weight:	208/248kDa
Cellular localization:	Secretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human ACAN:101-220/2415
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>Aggrecan is a member of a family of large, aggregating proteoglycans (also including versican, brevican and neurocan) which is found in articular cartilage. Aggrecan is composed of three major domains: G1, G2, and G3. Between the G1 and G2 domains there is an interglobulin region (IGD). The IGD region is the major site of cleavage by specific proteases like metalloproteinases (MMPs) and aggrecanase. Aggrecan cleavage has been associated with a number of degenerative diseases including rheumatoid arthritis and osteoarthritis. There is evidence that this family of proteoglycans modulates cell adhesion, migration, and axonal outgrowth in the CNS.</p> <p>Function: Aggrecan has been detected in neural precursor cells (neurospheres; Kabos et al, 2004) During differentiation, neurospheres downregulate Chondroitin sulfate proteoglycans (CSPGs). Proliferating neural precursors synthesize lecticans, including aggrecan, which are downregulated with differentiation; suggesting a link between CSPGs and CNS precursor biology.</p>

Subunit:

Interacts with FBLN1. Interacts with COMP.

Subcellular Location:

Secreted, extracellular space, extracellular matrix.

Tissue Specificity:

Restricted to cartilages.

Post-translational modifications:

Contains mostly chondroitin sulfate, but also keratan sulfate chains, N-linked and O-linked oligosaccharides. The release of aggrecan fragments from articular cartilage into the synovial fluid at all stages of human osteoarthritis is the result of cleavage by aggrecanase.

DISEASE:

Spondyloepiphyseal dysplasia type Kimberley (SEDK) [MIM:608361]:

Spondyloepiphyseal dysplasias are a heterogeneous group of congenital chondrodysplasias that specifically affect epiphyses and vertebrae. The autosomal dominant SEDK is associated with premature degenerative arthropathy. Note=The disease is caused by mutations affecting the gene represented in this entry.

Spondyloepimetaphyseal dysplasia aggrecan type (SEMD-ACAN) [MIM:612813]: A bone disease characterized by severe short stature, macrocephaly, severe midface hypoplasia, short neck, barrel chest and brachydactyly. The radiological findings comprise long bones with generalized irregular epiphyses with widened metaphyses, especially at the knees, platyspondyly, and multiple cervical-vertebral clefts. Note=The disease is caused by mutations affecting the gene represented in this entry.

Osteochondritis dissecans short stature and early-onset osteoarthritis (OD)

[MIM:165800]: A type of osteochondritis defined as a separation of cartilage and subchondral bone from the surrounding tissue, primarily affecting the knee, ankle and elbow joints. It is clinically characterized by multiple osteochondritic lesions in knees and/or hips and/or elbows, disproportionate short stature and early-onset osteoarthritis. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Belongs to the aggrecan/versican proteoglycan family.

Contains 1 C-type lectin domain.

Contains 1 EGF-like domain.

Contains 1 Ig-like V-type (immunoglobulin-like) domain.

Contains 4 Link domains.

Contains 1 Sushi (CCP/SCR) domain.

SWISS:

P16112

Gene ID:
176

Database links:

[Entrez Gene: 403828](#)Dog

[Entrez Gene: 176](#)Human

[Entrez Gene: 11595](#)Mouse

[Entrez Gene: 58968](#)Rat

[Oimim: 155760](#)Human

[SwissProt: Q28343](#)Dog

[SwissProt: P16112](#)Human

[SwissProt: Q61282](#)Mouse

[SwissProt: P07897](#)Rat

[Unigene: 2159](#)Human

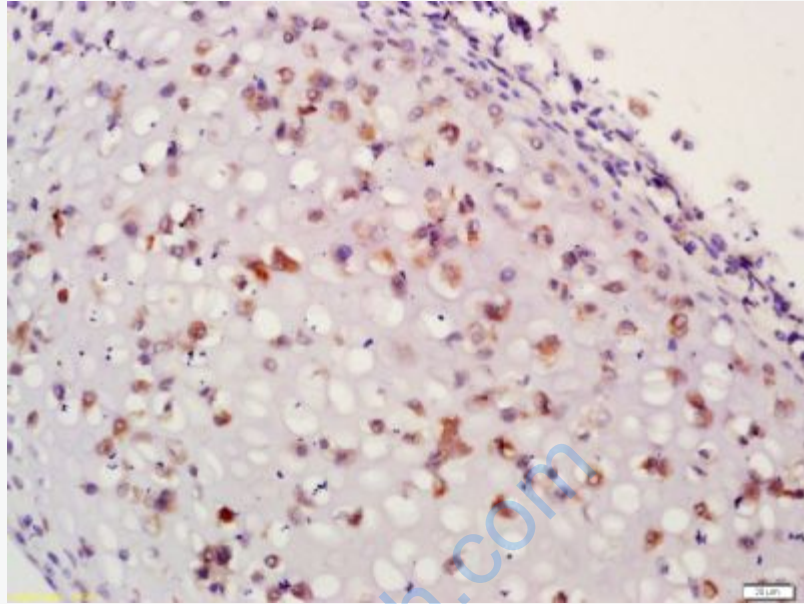
[Unigene: 358571](#)Mouse

[Unigene: 54503](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Aggrecan是软骨Extracellular matrix的主要结构成分之一。它与Collagen protein网络结合, 维持软骨弹性、缓冲压力, 承担负荷,并有自我润滑的性能。蛋白多糖的进行性丧失是骨性关节炎发病主要原因之一。

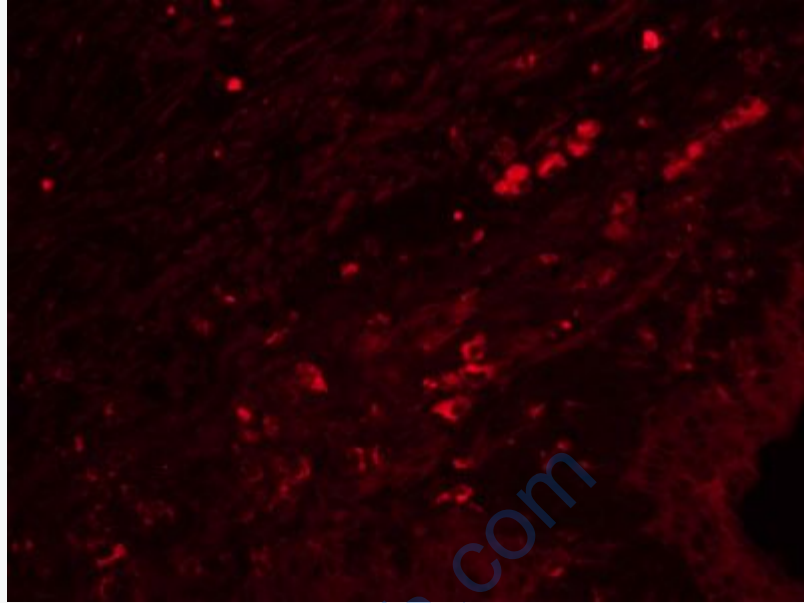


Picture:

Tissue/cell: mouse embryo tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Aggreca1 Polyclonal Antibody, Unconjugated(SL1223R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat kidney tissue;4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min;
Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Aggregan1 Polyclonal Antibody, Unconjugated(SL1223R) 1:200,
overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, Cy3
conjugated(SL1223R)used at 1:200 dilution for 40 minutes at 37°C.