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Rabbit Anti-Aggrecan1/Cy5 Conjugated antibody

SL1223R-Cy5

Product Name	Anti-Aggrecan1/Cy5
Chinese Name	Cy5 标记的软骨蛋白聚糖抗体
Alias	PGCA_HUMAN; ACAN; AGC 1; AGC1; AGCAN; Aggrecan 1 (chondroitin sulfate proteoglycan 1, large aggregating proteoglycan, antigen identified by monoclonal A0122); Aggrecan 1; Aggrecan core protein; Aggrecan proteoglycan; Aggrecan structural proteoglycan of cartilage; Aggrecan1; ATEGQV; Aggrecan ARGxx; Cartilage specific proteoglycan core protein; Chondroitin sulfate proteoglycan 1 ; Chondroitin sulfate proteoglycan 1 large aggregating proteoglycan antigen identified by monoclonal antibody A0122; Chondroitin sulfate proteoglycan core protein 1; CSPG 1; CSPG1; CSPGCP; JSCATE; Large aggregating proteoglycan; MSK 16; MSK16; SEDK.
Research Area	immunology Signal transduction Stem cells
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse,Rat(predicted:Human)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	208/248kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Aggrecan
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% 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 1M PBS or diluent of antibody the antibody is stable for at least two weeks

at 2-4 °C.

background:
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.

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.

Subunit:
Interacts with FBLN1. Interacts with COMP.

Product Detail

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.

Database links:

Entrez Gene: 403828 Dog

Entrez Gene: 176 Human

Entrez Gene: 11595 Mouse

Entrez Gene: 58968 Rat

Omim: 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病发病主要原因之一。