

ACAN Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54583**Specification**

ACAN Polyclonal Antibody - Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P16112
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	99 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse ACAN
Isotype	IgG
Purity affinity purified by Protein A	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted, extracellular space, extracellular matrix.
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.
SUBUNIT	Interacts with FBLN1. Interacts with COMP.
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. This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Important Note

Background Descriptions

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.

ACAN Polyclonal Antibody - Additional Information

Gene ID 176

Other Names

Aggrecan core protein, Cartilage-specific proteoglycan core protein, CSPCP, Chondroitin sulfate proteoglycan core protein 1, Chondroitin sulfate proteoglycan 1, Aggrecan core protein 2, ACAN, AGC1, CSPG1, MSK16

Target/Specificity

Restricted to cartilages.

Dilution

IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glycerol

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

ACAN Polyclonal Antibody - Protein Information

Name ACAN

Synonyms AGC1, CSPG1, MSK16

Function

This proteoglycan is a major component of extracellular matrix of cartilagenous tissues. A major function of this protein is to resist compression in cartilage. It binds avidly to hyaluronic acid via an N-terminal globular region.

Cellular Location

Secreted, extracellular space, extracellular matrix {ECO:0000250|UniProtKB:P07898}

Tissue Location

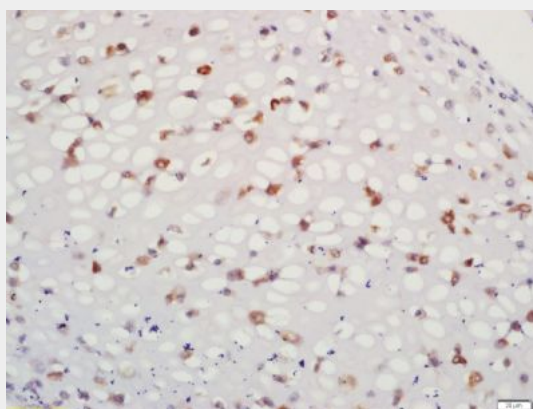
Detected in fibroblasts (at protein level) (PubMed:36213313). Restricted to cartilage (PubMed:7524681)

ACAN Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

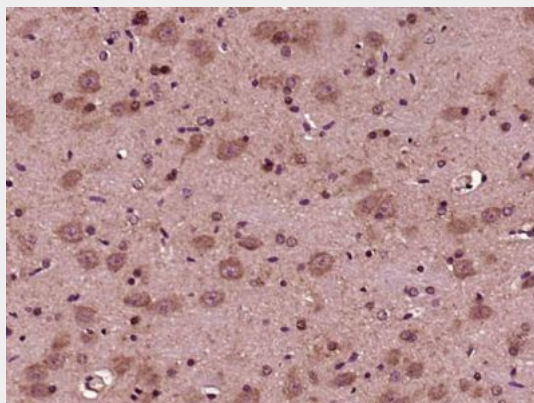
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ACAN Polyclonal Antibody - Images



Tissue/cell: bone of mouse embryo; 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-Aggrecan Polyclonal Antibody, Unconjugated(bs-11655R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Aggrecan) Polyclonal Antibody, Unconjugated (bs-11655R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.