

# ACAN Rabbit pAb

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Catalog # AP52137

## Product Information

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>             | IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Primary Accession</b>       | <a href="#">P16112</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reactivity</b>              | Rat, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Predicted</b>               | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Host</b>                    | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Clonality</b>               | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Calculated MW</b>           | 261329                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Physical State</b>          | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Immunogen</b>               | KLH conjugated synthetic peptide derived from human ACAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Epitope Specificity</b>     | 101-220/2415                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>                 | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>                  | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Buffer</b>                  | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SUBCELLULAR LOCATION</b>    | Secreted, extracellular space, extracellular matrix.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DISEASE</b>                 | 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. |
| <b>Important Note</b>          | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Background Descriptions</b> | 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.

## Additional Information

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| 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 |
| Dilution    | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500                                                                                                                                                                       |
| 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.                    |

## Protein Information

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| 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<br>{ECO:0000250 UniProtKB:P07898}                                                                                                                                                  |
| Tissue Location   | Detected in fibroblasts (at protein level) (PubMed:36213313). Restricted to cartilage (PubMed:7524681)                                                                                                                                 |

## Background

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## References

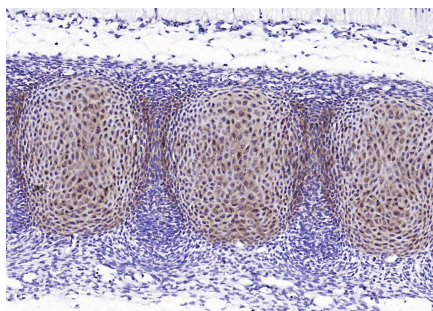
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Sandy J.D.,et al.J. Clin. Invest. 89:1512-1516(1992).  
Glumoff V.,et al.Biochim. Biophys. Acta 1219:613-622(1994).  
Lohmander L.S.,et al.Arthritis Rheum. 36:1214-1222(1993).

## Images

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Paraformaldehyde-fixed, paraffin embedded Rat Embryo;  
Antigen retrieval by boiling in sodium citrate buffer  
(pH6.0) for 15 min; Antibody incubation with ACAN



Polyclonal Antibody, Unconjugated (AP52137) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.