

Rabbit Anti-ACAN antibody

SL41346R

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.
Research Area	immunology Signal transduction Stem cells
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat,) WB=1:500-2000,ELISA=1:5000-10000
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	222kDa
Cellular localization	Secretory protein
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human ACAN protein: 2321-2530/2530
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product Detail	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.

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

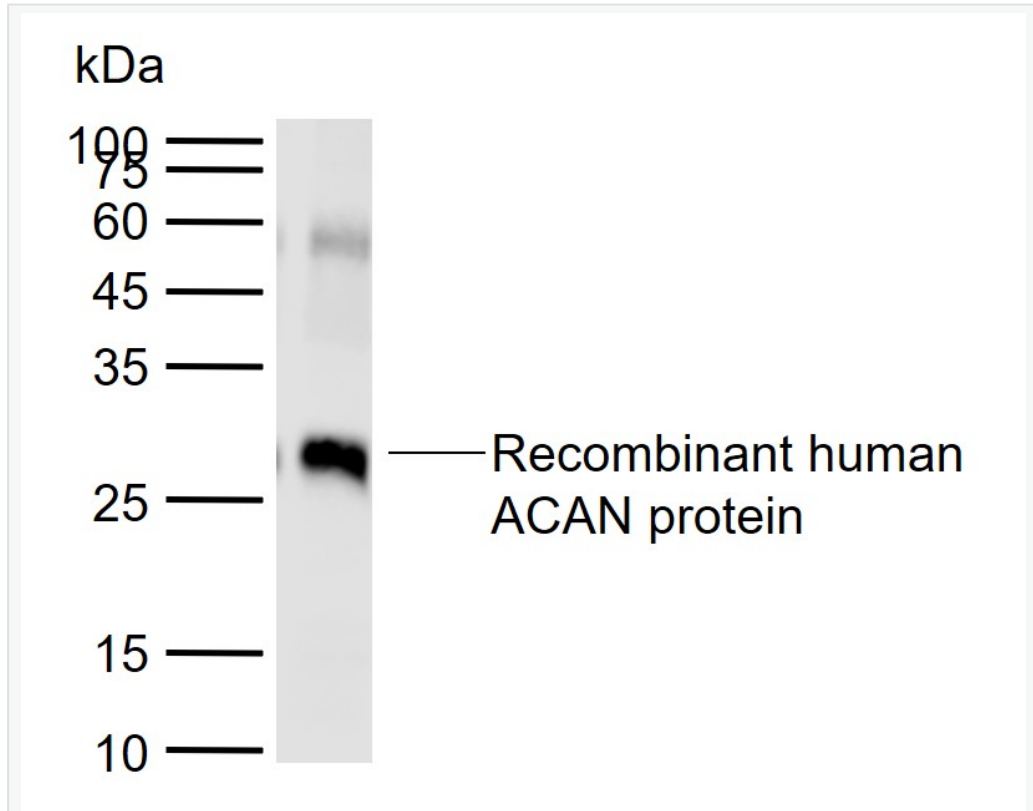
[Unigene: 2159](#) Human

[Unigene: 358571](#) Mouse

[Unigene: 54503](#) Rat

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。

Product
Picture



Sample:

Lane 1: Recombinant human ACAN protein

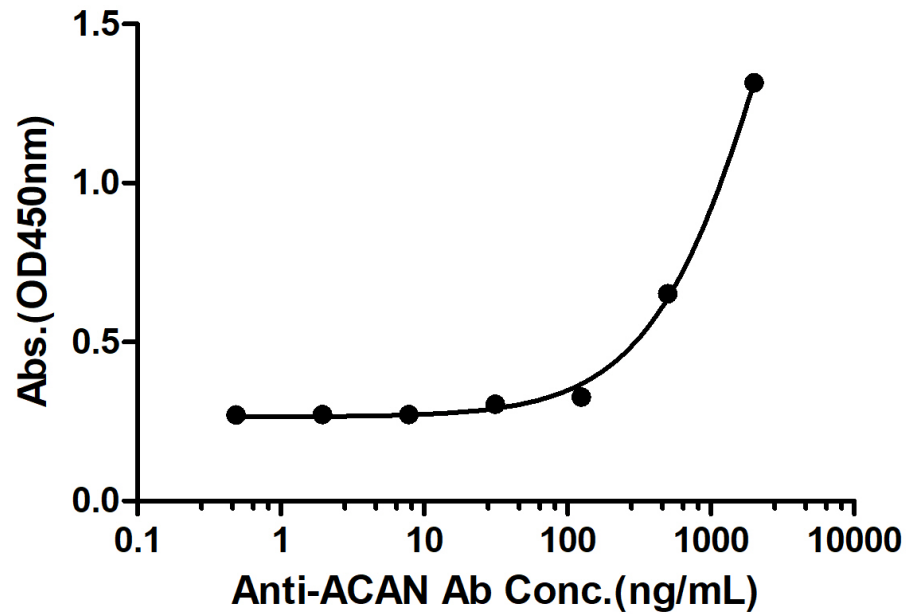
Primary: Anti-ACAN (SL41346R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 222 kDa

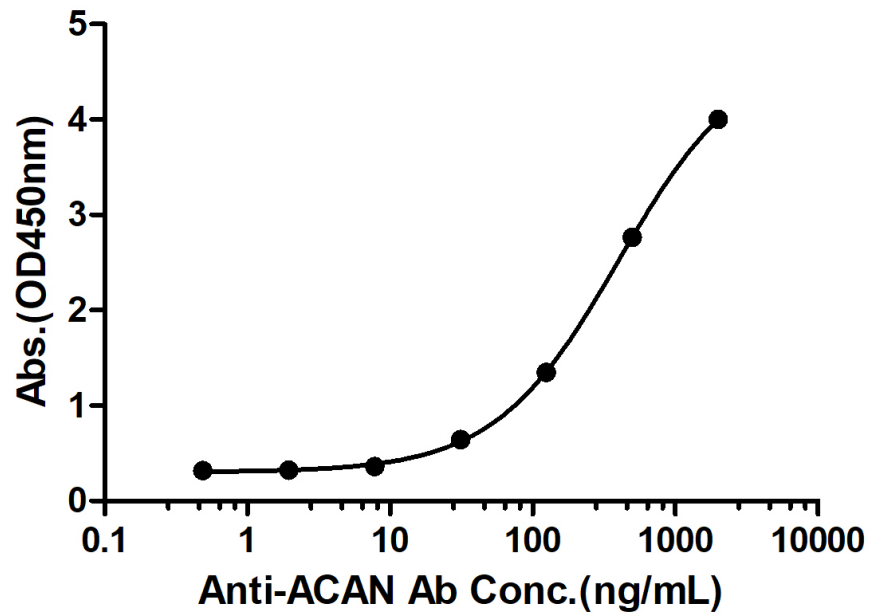
Observed band size: 27 kDa

Rabbit Anti-Human ACAN Antibody Bind with Human ACAN protein, His Tag



Measured by its binding ability in a indirect ELISA. Immobilized Human ACAN protein, His Tag (Cat. SL41346P) at 2 $\mu\text{g}/\text{mL}$ (100 $\mu\text{L}/\text{well}$) can bind Rabbit Anti-Human ACAN Antibody, the EC50 is 3071 ng/mL.

Rabbit Anti-Human ACAN Antibody Bind with Human ACAN protein, His Tag



Measured by its binding ability in a indirect ELISA. Immobilized Human ACAN protein, His Tag (Cat. SL41346P) at 2 $\mu\text{g}/\text{mL}$ (100 $\mu\text{L}/\text{well}$) can bind Rabbit Anti-Human ACAN Antibody, the EC50 is 402 ng/mL.