

Datasheet for ABIN2859306

Aggrecan ELISA Kit**1** Image[Go to Product page](#)

Overview

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| Quantity: | 96 tests |
| Target: | Aggrecan (ACAN) |
| Binding Specificity: | AA 20-675 |
| Reactivity: | Human |
| Method Type: | Sandwich ELISA |
| Detection Range: | 1.56-100 ng/mL |
| Minimum Detection Limit: | 1.56 ng/mL |
| Application: | ELISA |

Product Details

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| Purpose: | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Aggrecan |
| Brand: | PicoKine™ |
| Sample Type: | Cell Culture Supernatant, Serum, Urine |
| Analytical Method: | Quantitative |
| Detection Method: | Colorimetric |
| Immunogen: | Expression system for standard: NSO Immunogen sequence: V20-G675 |
| Specificity: | NSO, V20-G675 |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins. |
| Sensitivity: | <50pg/mL |

Product Details

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| Material not included: | Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl |
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Target Details

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| Target: | Aggrecan (ACAN) |
| Alternative Name: | ACAN (ACAN Products) |
| Background: | <p>Protein 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.</p> <p>Background: Aggrecan, also known as cartilage-specific proteoglycan core protein (CSPCP) or chondroitin sulfate proteoglycan 1, is a protein that in humans is encoded by the ACAN gene. It is a critical component for cartilage structure and the function of joints. Aggrecan provides intervertebral disc and cartilage with the ability to resist compressive loads. The localized high concentrations of aggrecan provide the osmotic properties necessary for normal tissue function with the GAGs producing the swelling pressure that counters compressive loads on the tissue. This functional ability is dependent on a high GAG/aggrecan concentration being present in the tissue extracellular matrix. Also, Aggrecan plays an important role in the organization of the extracellular spaces between neurons in the brain.</p> <p>Synonyms: 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,</p> <p>Full Gene Name: Aggrecan core protein</p> <p>Cellular Localisation: Secreted, extracellular space, extracellular matrix.</p> |
| Gene ID: | 176 |
| UniProt: | P16112 |
| Pathways: | Glycosaminoglycan Metabolic Process , Dicarboxylic Acid Transport |

Application Details

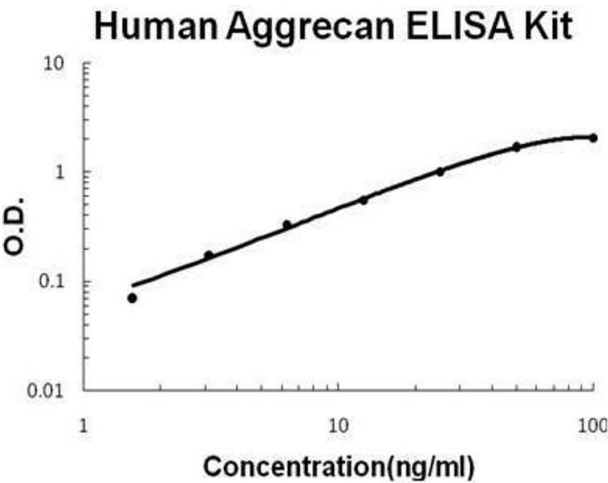
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| Application Notes: | Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing. |
| Comment: | Tissue Specificity: Restricted to cartilages. . |

Application Details

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| Plate: | Pre-coated |
| Protocol: | human Aggrecan ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Aggrecan has been precoated onto 96-well plates. Standards (NSO, V20-G675) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Aggrecan is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Aggrecan amount of sample captured in plate. |
| Assay Procedure: | Aliquot 0.1 mL per well of the 100 ng/mL, 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/mL, 3.12 ng/mL, 1.56 ng/mL human Aggrecan standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Aggrecan standard solution and each sample be measured in duplicate. |
| Assay Precision: | <ul style="list-style-type: none">• Sample 1: n=16, Mean(ng/ml): 15, Standard deviation: 0.825, CV(%): 5.5• Sample 2: n=16, Mean(ng/ml): 42, Standard deviation: 1.806, CV(%): 4.3• Sample 3: n=16, Mean(ng/ml): 74, Standard deviation: 4.588, CV(%): 6.2,• Sample 1: n=24, Mean(ng/ml): 16, Standard deviation: 0.944, CV(%): 5.9• Sample 2: n=24, Mean(ng/ml): 41, Standard deviation: 2.255, CV(%): 5.5• Sample 3: n=24, Mean(ng/ml): 72, Standard deviation: 4.824, CV(%): 6.7 |
| Restrictions: | For Research Use only |

Handling

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| Handling Advice: | Avoid multiple freeze-thaw cycles. |
| Storage: | -20 °C, 4 °C |
| Storage Comment: | Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles |
| Expiry Date: | 12 months |



ELISA

Image 1. Human Aggrecan PicoKine ELISA Kit standard curve