

Product datasheet

Human Aggrecan ELISA Kit ab213754

1 Image

Overview

Product name Human Aggrecan ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
1	16	15ng/ml	0.825	5.5%
2	16	42ng/ml	1.806	4.3%
3	16	74ng/ml	4.588	6.2%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	16ng/ml	0.944	5.9%
2	24	41ng/ml	2.255	5.5%
3	24	72ng/ml	4.824	6.7%

Sample type Cell culture supernatant, Urine, Serum

Assay type Sandwich (quantitative)

Sensitivity < 50 pg/ml

Range 1.56 ng/ml - 100 ng/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview The Human Aggrecan Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213754) is designed for the quantitative measurement of Human Aggrecan in cell culture supernatants, serum and urine.

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A

monoclonal antibody from mouse specific for Aggrecan has been pre-coated onto 96-well plates. Standards (NSO, V20-G675) and test samples are added to the wells, a biotinylated detection monoclonal antibody from mouse specific for Aggrecan is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB is used to visualize HRP enzymatic reaction. TMB is 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.

Notes 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.

Platform Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Adhesive Plate Seal		4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml
Anti-Human Aggrecan coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 130µl
Biotinylated anti- Human Aggrecan antibody		1 x 130µl
Lyophilized recombinant Human Aggrecan standard		2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml

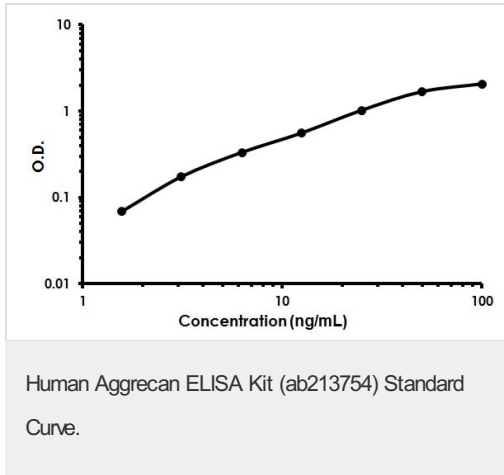
Relevance Aggrecan is a member of a family of large, aggregating proteoglycans (also including versican, brevican and neurocan) which is found in articular cartilage. Aggrecan is composed of three major domains: G1, G2, and G3. Between the G1 and G2 domains there is an interglobulin region (IGD). The 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.

Cellular localization

Secreted; extracellular matrix.

Images



Human Aggrecan ELISA Kit (ab213754) Standard Curve.

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