

aggrecan (H-300): sc-25674

BACKGROUND

The large chondroitin sulfate proteoglycan, aggrecan, is the predominant proteoglycan present in cartilage. Aggrecan is a member of the chondroitin sulphate proteoglycan family, which also includes versican/PG-M, neurocan and brevican. Aggrecan is a complex multidomain macromolecule that undergoes extensive processing and post-translational modification. In cartilage, aggrecan forms aggregates with hyaluronan and link protein, embedded in a collagen network. Aggrecan accounts for the compressive stiffness and resilience of the hyaline cartilage. Many forms of inflammatory arthritis are shown to be accompanied with aggrecan degradation and loss from the cartilage.

REFERENCES

1. Buzas, E.I., et al. 1996. Aggrecan: a target molecule of autoimmune reactions. *Pathol. Oncol. Res.* 2: 219-228.
2. Domowicz, M.S., et al. 2000. Role of the C-terminal G₃ domain in sorting and secretion of aggrecan core protein and ubiquitin-mediated degradation of accumulated mutant precursors. *J. Biol. Chem.* 275: 35098-35105.

CHROMOSOMAL LOCATION

Genetic locus: AGC1 (human) mapping to 15q26.1; Agc1 (mouse) mapping to 7 D3.

SOURCE

aggrecan (H-300) is a rabbit polyclonal antibody raised against amino acids 1911-1962 of aggrecan of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

aggrecan (H-300) is recommended for detection of aggrecan of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

aggrecan (H-300) is also recommended for detection of aggrecan in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for aggrecan siRNA (h): sc-41897, aggrecan siRNA (m): sc-41898, aggrecan shRNA Plasmid (h): sc-41897-SH, aggrecan shRNA Plasmid (m): sc-41898-SH, aggrecan shRNA (h) Lentiviral Particles: sc-41897-V and aggrecan shRNA (m) Lentiviral Particles: sc-41898-V.

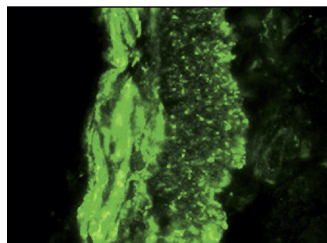
Molecular Weight of aggrecan: 200 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or C6 whole cell lysate: sc-364373.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



aggrecan (H-300): sc-25674. Immunofluorescence staining of normal mouse intestine frozen section showing extracellular matrix staining.

SELECT PRODUCT CITATIONS

1. Osipovich, A.B., et al. 2008. Dyggve-Melchior-Clausen syndrome: chondrodysplasia resulting from defects in intracellular vesicle traffic. *Proc. Natl. Acad. Sci. USA* 105: 16171-16176.
2. Wang, J., et al. 2009. Transcription factor Nfat1 deficiency causes osteoarthritis through dysfunction of adult articular chondrocytes. *J. Pathol.* 219: 163-172.
3. Shen, J., et al. 2010. Arterial injury promotes medial chondrogenesis in Sm22 knockout mice. *Cardiovasc. Res.* 90: 28-37.
4. Ytteborg, E., et al. 2010. Remodeling of the notochord during development of vertebral fusions in Atlantic salmon (*Salmo salar*). *Cell Tissue Res.* 342: 363-376.
5. Gualeni, B., et al. 2010. Defective proteoglycan sulfation of the growth plate zones causes reduced chondrocyte proliferation via an altered Indian hedgehog signalling. *Matrix Biol.* 29: 453-460.
6. Yang, X., et al. 2011. Enhancement of matrix production and cell proliferation in human annulus cells in rotating bioreactor culture. *Tissue Eng. Part A* 17: 1595-1603.
7. Keller, L., et al. 2011. Tooth engineering: searching for dental mesenchymal cells sources. *Front. Physiol.* 2: 7.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **aggrecan (4F4): sc-33695** or **aggrecan/brevican (D-4): sc-166951**, our highly recommended monoclonal alternatives to aggrecan (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **aggrecan (4F4): sc-33695**.