

# aggrecan/brevican (C-20): sc-16493

## 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. Aggrecan in cartilage 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. Brevican is a brain proteoglycan of the aggrecan/versican/neurocan family. In the adult brain, the brevican core protein undergoes proteolytic cleavage and exists as a full-length form a carboxy-terminal fragment and an amino-terminal fragment.

## CHROMOSOMAL LOCATION

Genetic locus: ACAN (human) mapping to 15q26.1, BCAN (human) mapping to 1q23.1; Acan (mouse) mapping to 7 D3, Bcan (mouse) mapping to 3 F1.

## SOURCE

aggrecan (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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.

Blocking peptide available for competition studies, sc-16493 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

aggrecan/brevican (C-20) is recommended for detection of aggrecan and brevican 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/brevican (C-20) is also recommended for detection of aggrecan and brevican in additional species, including equine, canine, bovine and porcine.

Molecular Weight of aggrecan: 200 kDa.

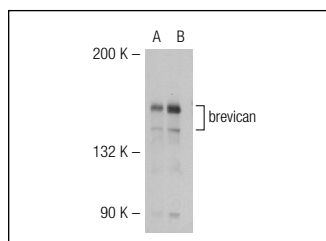
Molecular Weight of full-length brevican: 145 kDa.

Positive Controls: brevican (h2): 293T Lysate: sc-113884, mouse heart extract: sc-2254 or HeLa whole cell lysate: sc-2200.

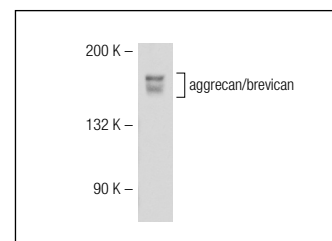
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



aggrecan/brevican (C-20): sc-16493. Western blot analysis of brevican expression in non-transfected: sc-117752 (A) and human brevican transfected: sc-113884 (B) 293T whole cell lysates.



aggrecan/brevican (C-20): sc-16493. Western blot analysis of aggrecan/brevican expression in mouse heart tissue extract.

## SELECT PRODUCT CITATIONS

- Díaz-Prado, S., et al. 2010. Multilineage differentiation potential of cells isolated from the human amniotic membrane. *J. Cell. Biochem.* 111: 846-857.
- Cicione, C., et al. 2010. Molecular profile and cellular characterization of human bone marrow mesenchymal stem cells: donor influence on chondrogenesis. *Differentiation* 80: 155-165.
- Ferro, F., et al. 2012. Acellular bone colonization and aggregate culture conditions diversely influence murine periosteum mesenchymal stem cell differentiation potential in long-term *in vitro* osteoinductive conditions. *Tissue Eng. Part A* 18: 1509-1519.
- Fujita, K., et al. 2012. Age-related expression of MCP-1 and MMP-3 in mouse intervertebral disc in relation to TWEAK and TNF- $\alpha$  stimulation. *J. Orthop. Res.* 30: 599-605.

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **aggrecan/brevican (D-4): sc-166951**, our highly recommended monoclonal alternative to aggrecan/brevican (C-20).