**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/brevican (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2255-2280 near the C-terminus of aggrecan of human origin.

**PRODUCT**

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166951 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**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 (D-4) is recommended for detection of aggrecan and brevican of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (D-4) is also recommended for detection of aggrecan and brevican in additional species, including canine.

Molecular Weight of aggrecan: 200 kDa.

Molecular Weight of full-length brevican: 145 kDa.

Positive Controls: A-10 cell lysate: sc-3806, C4 whole cell lysate: sc-364186 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgG BP-HRP, sc-516102 or m-IgG BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Image](Image)

aggrecan/brevican (D-4): sc-166951. Western blot analysis of aggrecan/brevican expression in c4 [A] and A-10 [B] whole cell lysates.

aggrecan/brevican (D-4): sc-166951. Immunofluorescence staining of formalin-fixed Hela cells showing cell surface localization.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

See aggrecan (4F4): sc-33695 for aggrecan antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.