

aggrecan (E-12): sc-67513

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 multi-domain macromolecule that undergoes extensive processing and posttranslational 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 by 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.
3. Knudson, C.B. and Knudson, W. 2001. Cartilage proteoglycans. *Semin. Cell Dev. Biol.* 12: 69-78.
4. Chen, T.L., et al. 2001. Aggrecan domains expected to traffic through the exocytic pathway are misdirected to the nucleus. *Exp. Cell Res.* 263: 224-235.
5. Kiani, C., et al. 2001. Roles of aggrecan domains in biosynthesis, modification by glycosaminoglycans and product secretion. *Biochem. J.* 354: 199-207.
6. Brückner, G., et al. 2008. Aggrecan-based extracellular matrix is an integral part of the human basal ganglia circuit. *Neuroscience* 151: 489-504.

CHROMOSOMAL LOCATION

Genetic locus: AGC1 (human) mapping to 15q26.1.

SOURCE

aggrecan (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-67513 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

aggrecan (E-12) is recommended for detection of aggrecan of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

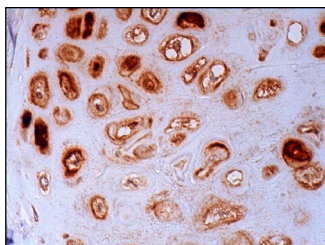
Suitable for use as control antibody for aggrecan siRNA (h): sc-41897, aggrecan shRNA Plasmid (h): sc-41897-SH and aggrecan shRNA (h) Lentiviral Particles: sc-41897-V.

Molecular Weight of aggrecan: 200 kDa.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



aggrecan (E-12): sc-67513. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cartilage tissue showing cytoplasmic staining of chondrocytes.

RESEARCH USE

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