Anti-Aggrecan antibody [6-B-4] ab3778

**Overview**

**Product name**
Anti-Aggrecan antibody [6-B-4]

**Description**
Mouse monoclonal [6-B-4] to Aggrecan

**Host species**
Mouse

**Tested applications**
Suitable for: ELISA, IHC-P, IHC-Fr, WB, ICC/IF

**Species reactivity**
Reacts with: Mouse, Cow, Human

**Immunogen**
Synthetic peptide: EPEEPFTFAPEI, corresponding to amino acids 413-424 of Human Aggrecan.

**General notes**
Samples are usually deglycosylated using 0.01 Units Chondroitinase ABC (Sigma), 0.01 Units Keratanase (Seikagaku) and 0.0001 Units Keratanase II (Seikagaku) per 10µg S-GAG of non-deglycosylated aggrecan for optimal epitope recognition in SDS-PAGE and immunohistochemistry – see Little et al. and Caterson et al. Diluted Technomouse culture supernatant.

This antibody detects aggrecan metabolites (intact or matrix protease-catabolised) in human synovial fluid samples.

**Properties**

**Form**
Liquid

**Storage instructions**
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**
pH: 7.40
Preservative: 0.02% Sodium azide
Constituent: 0.2% Tris HCl

**Purity**
Tissue culture supernatant

**Primary antibody notes**
This antibody detects aggrecan metabolites (intact or matrix protease-catabolised) in human synovial fluid samples.

**Clonality**
Monoclonal

**Clone number**
6-B-4
Myeloma x63-Ag8.653
Isotype IgG1
Light chain type kappa

Applications

Our Abpromise guarantee covers the use of ab3778 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
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<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td></td>
<td>1/100. The antibody will see a large range of aggrecan metabolites/catabolites ranging from greater than 250kD down to 50-60kDa.</td>
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<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 21192818</td>
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</tbody>
</table>

Target

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
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aggrecan antibody [6-B-4] (ab3778)
This image is courtesy of an Abreview submitted by Ms Elizabeth Chlipala

ab3778 at 1/100 staining human articular cartilage by IHC-P. The tissue was formaldehyde fixed and blocked with a serum free protein block. An enzymatic antigen retrieval step was performed and the tissue was then incubated with the antibody for 1 hour. An HRP conjugated goat polyclonal antibody was used as the secondary.

Immunofluorescence analysis of Human articular chondrocytes, staining Aggrecan with ab3778.

Cells were fixed with paraformaldehyde and blocked with 1% BSA for 1 hour. Cells were incubated with primary antibody overnight at 4°C. An AlexaFluor®488-conjugated rabbit anti-mouse IgG was used as the secondary antibody.

Immunocytochemistry/ Immunofluorescence - Anti-Aggrecan antibody [6-B-4] (ab3778)

ab3778 used at a 1/50 dilution staining Aggrecan in human umbilical cord matrix mesenchymal stromal cells by Immunocytochemistry/ Immunofluorescence.

Frozen sections of the 3D constructs (10µm) (n=2) were rehydrated with PBS for 5 minutes, and endogenous peroxidase activity was inhibited using 1% hydrogen peroxide in methanol for 30 minutes. The sections were then blocked in 3% horse serum for 20 minutes and incubated with a primary antibody, ab3778, for 1 hour at a 1/50 dilution. After primary antibody incubation the sections were incubated with a streptavidin linked horse anti-mouse IgG secondary antibody for 30 minutes. After secondary antibody incubation, the sections were incubated with avidin-biotinylated enzyme complex for 30 minutes, and then VIP substrate (purple color) was applied on sections for 4 minutes.

The image shown is at 4 weeks, 25M.
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