

## MONOCLONAL ANTIBODY

Cat. code 270433-CS

## Anti CS[Chondroitin Sulfate] (3B3)

## BACKGROUND

Monoclonal antibody 3B3 recognises 6-sulfated unsaturated disaccharide neopeptides (i.e. C-6-S "stubs") generated at the non-reducing terminal of Chondroitin Sulfate glycosaminoglycan chains that have been pre-digested with either Chondroitinase ABC or Chondroitinase ACII. Monoclonal antibody 3B3 also recognises a non-reducing end saturated disaccharide epitope in 'native' Chondroitin Sulfate glycosaminoglycan chains consisting of a terminal glucuronic acid adjacent to 6-sulfated N-acetyl-galactosamine. The chondroitinase-generated neopeptide is often denoted as 3B3(+) and the 'native' terminal epitope as 3B3(-) in publications [see Figure 2; Caterson B (2012) Int. J. Exp. Pathol. 93: 1 - 10].

<b>Product type</b>	Primary antibody
<b>Immunogen</b>	6-sulfated chondroitin sulfate disaccharide Chondroitinase ABC digested Rat Chondrosarcoma Aggrecan
<b>Raised in</b>	Mouse (BALB/c)
<b>Myeloma</b>	X63-Ag8.653
<b>Clone number</b>	3B3
<b>Isotype</b>	IgM
<b>Source</b>	Serum containing culture supernatant
<b>Purification</b>	-
<b>Buffer</b>	0.01M Tris-saline containing 0.02% NaN <sub>3</sub> as a preservative
<b>Concentration</b>	Not known
<b>Volume</b>	1 mL
<b>Label</b>	Unlabeled
<b>Specificity</b>	6-sulfated unsaturated disaccharide neopeptides (i.e. C-6-S "stubs") generated at the non-reducing terminal of Chondroitin Sulfate glycosaminoglycan chains that have been pre-digested with either Chondroitinase ABC or Chondroitinase ACII. Monoclonal antibody 3B3 also recognises a non-reducing end saturated disaccharide epitope in 'native' Chondroitin Sulfate glycosaminoglycan chains consisting of a terminal glucuronic acid adjacent to 6-sulfated N-acetyl-galactosamine [see Figure 2; Caterson (2012) Int. J. Exp. Pathol. 93: 1 - 10].
<b>Cross reactivity</b>	All animal species
<b>Storage</b>	Stable for 3-4 days @ 4°C. Store below -20°C (below -70°C for prolonged storage). Aliquot to avoid repeated cycles of freeze/thawing.
<b>Other</b>	Note: Secondary 'reporter' antibodies must recognise either mouse immunoglobulin IgM heavy chains and/or mouse lambda & kappa light chains for appropriate detection of this primary antibody. See Hayes AJ et al (2008) Methods 45: 10 - 21

<b>Application notes</b>	• <b>Western blotting:</b> 1/100 (e.g. 50µl to 5 ml with blocking buffer)
<b>Recommended dilutions</b>	• <b>Immunohistochemistry:</b> 1/20 (e.g. 20µl to 400µl with blocking buffer).

Other applications have not been tested.  
Optimal dilutions/concentrations should be determined by the end user.

<b>References</b>	<ol style="list-style-type: none"> <li>Caterson B. (2012). Chondroitin sulphate glycosaminoglycans: fun for some and confusion for others. Int. J. of Exp. Pathol. 93: 1 – 10 PubMed: <a href="#">22264297</a></li> <li>Hayes AJ, Hughes CE &amp; Caterson B (2008). Antibodies and immunohistochemistry in extracellular matrix research. Methods 45: 10 - 21 PubMed: <a href="#">18442701</a></li> <li>Davies L, Blain E, Caterson B and Duan VC (2008). Chondroitin sulphate impedes the migration of a sub-population of articular cartilage chondrocytes. Osteoarthritis &amp; Cartilage 16: 855 - 864 PubMed: <a href="#">18222711</a></li> <li>Caterson B, Mahmoodian F, Sorrell JM, Hardingham TE, Bayliss MT, Carney SL, Ratcliffe A &amp; Muir H (1990). Modulation of native chondroitin sulfate structure in tissue development and in disease. J. Cell Sci. 97: 411 – 417. PubMed: <a href="#">1705939</a></li> <li>Hayes AJ, Hall A, Brown L, Tubo R &amp; Caterson B (2007). Macromolecular organization and in vitro growth characteristics of scaffold-free neocartilage grafts. J. Histochem. Cytochem. 55: 853 – 866. PubMed: <a href="#">17478447</a></li> <li>Caterson B, Christner JE, Baker JR &amp; Couchman JR (1985). The production and characterization of monoclonal antibodies directed against connective tissue proteoglycans. Federation Proceedings 44: 386 – 393. PubMed: <a href="#">2578417</a></li> <li>Couchman JR, Caterson B, Christner JE &amp; Baker JR (1984). Mapping by monoclonal antibody detection of glycosaminoglycans in connective tissues. Nature 307: 650 – 652. PubMed: <a href="#">6420711</a></li> </ol>
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AMS BIO | [www.amsbio.com](http://www.amsbio.com) | [info@amsbio.com](mailto:info@amsbio.com)

 **UK & Rest of the World**  
184 Park Drive, Milton Park  
Abingdon OX14 4SE, UK  
T: +44 (0)1235 828 200  
F: +44 (0) 1235 820 482

 **North America**  
1035 Cambridge Street,  
Cambridge, MA 02141  
T: +1 (617) 945-5033 or  
T: +1 (800) 987-0985  
F: +1 (617) 945-8218

 **Germany**  
Bockenheimer Landstr. 17/19  
60325 Frankfurt/Main  
T: +49 (0) 69 779099  
F: +49 (0) 69 13376880

 **Switzerland**  
Centro Nord-Sud 2E  
CH-6934 Bioggio-Lugano  
T: +41(0) 91 604 55 22  
F: +41(0) 91 605 17 85