



## MONOCLONAL ANTIBODY

For research use only, Not for diagnostic use

Catalog PRPG-BC-M01

**Anti KS [Keratan Sulfate] (5D4)****BACKGROUND**

Monoclonal antibody 5D4 recognises oversulfated heptasaccharide epitopes containing 6-sulfated galactose adjacent with 6-sulfated N-acetyl-glucosamine in oligosaccharide segments of Keratan Sulfate glycosaminoglycan chains. Pre-digestion with Keratanase II removes these epitopes from Keratan Sulfate glycosaminoglycan chains. However, pre-digestion with Keratinase will not necessarily remove these Keratan Sulfate glycosaminoglycan chain epitopes.

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product type</b>     | Primary antibody                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Immunogen</b>        | Oversulfated oligosaccharides in Keratan Sulfate glycosaminoglycan chains.<br>Chondroitinase ABC digested Human Aggrecan                                                                                                                                                                                                                                                                                                       |
| <b>Raised in</b>        | Mouse (BALB/c)                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Myeloma</b>          | X63-Ag8.653                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Clone number</b>     | 5D4                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Isotype</b>          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Host</b>             | -                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <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>      | Oversulfated heptasaccharide epitopes containing 6-sulfated galactose adjacent with 6-sulfated N-acetyl-glucosamine in oligosaccharide segments of Keratan Sulfate glycosaminoglycan chains. Pre-digestion with Keratanase II removes these epitopes from Keratan Sulfate glycosaminoglycan chains. However, pre-digestion with Keratinase will not necessarily remove these Keratan Sulfate glycosaminoglycan chain epitopes. |
| <b>Cross reactivity</b> | All animal species                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Storage</b>          | Stable for 3-4 days @ 4°C.<br>Store below -20°C (below -70°C for prolonged storage).<br>Aliquot to avoid repeated cycles of freeze/thawing.                                                                                                                                                                                                                                                                                    |
| <b>Other</b>            | See Hayes AJ et al (2008) Methods 45: 10 - 21                                                                                                                                                                                                                                                                                                                                                                                  |

|                              |                                                                                                                                                                                                      |
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| <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).<br>Other applications have not been tested.<br>Optimal dilutions/concentrations should be determined by the end user. |

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|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>References</b> | <ol style="list-style-type: none"><li>Schwend T, Deaton RJ, Zhang Y, Caterson B &amp; Conrad CW (2012). Corneal sulphated glycosaminoglycans and their effects on trigeminal nerve growth cone behaviour in vitro – roles for ECM in corneal innervation. Invest Ophthalmol Vis Sci. 53: 8118 – 8137. PubMed: <a href="#">23132805</a></li><li>Liles M, Palka BP, Harris A, Kerr BC, Hughes CE, Young RD, Meek KM, Caterson B, Quantok AJ (2010). Differential relative sulphation of keratan sulphate glycosaminoglycan in the chick cornea during embryonic development. Invest. Ophthalmol. Vis. Sci. 51: 1365-1372 PubMed: <a href="#">19815728</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>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>Mehmet H, Scudder P, Tang, PW, Hounsell, EF, Caterson, B &amp; Feizi T (1986). Antigenic determinants recognized by three monoclonal antibodies to keratan sulfate involve sulfated hepta- or larger oligosaccharides of the poly-N-acetylglucosamine series. Eur. J. Biochem. 157: 385 – 391. PubMed: <a href="#">2423332</a></li><li>Funderburgh JL, Caterson B &amp; Conrad GW (1986). Keratan sulfate proteoglycan during embryonic development of the chicken cornea. Developmental Biology 116: 267 – 277 PubMed: <a href="#">2942429</a></li><li>Caterson B, Christner JE &amp; Baker JR (1983). Identification of a monoclonal antibody that specifically recognizes corneal and skeletal keratan sulfate. Monoclonal antibodies to cartilage proteoglycan. J. Biol. Chem. 258: 8848 – 8854 PubMed: <a href="#">6223038</a></li></ol> |
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## RELATED PRODUCTS:

| Product Name                                      | Clone   | Maker | Cat#          |
|---------------------------------------------------|---------|-------|---------------|
| Anti CS [Chondroitin Sulfate] Monoclonal Antibody | 2B6     | CAC   | PRPG-BC-M02   |
| Anti CS [Chondroitin Sulfate] Monoclonal Antibody | 1B5     | CAC   | PRPG-BC-M03   |
| Anti CS [Chondroitin Sulfate] Monoclonal Antibody | 3B3     | CAC   | PRPG-BC-M04   |
| Anti Chondroitin Sulfate A Monoclonal Antibody    | 2H6     | CAC   | NU-07-001     |
| Anti Aggrecan Monoclonal Antibody                 | 6F4     | CAC   | PRPG-AG-M01   |
| Anti Aggrecan Monoclonal Antibody                 | 5D3     | CAC   | PRPG-AG-M02   |
| Anti Aggrecan Monoclonal Antibody                 | 5G2     | CAC   | PRPG-AG-M03   |
| Anti Aggrecan Monoclonal Antibody                 | 7B7     | CAC   | PRPG-AG-M04   |
| Anti Versican/CSPG2 Monoclonal Antibody           | 5C12    | CAC   | PRPG-VS-M01   |
| Anti Versican/CSPG2 Monoclonal Antibody           | 4C5     | CAC   | PRPG-VS-M02   |
| Anti Neurocan Monoclonal Antibody                 | 1G2     | CAC   | NU-07-002     |
| Anti Neuroglycan C Monoclonal Antibody            | C1      | CAC   | NU-07-003     |
| Anti Neurocan peptides Polyclonal Antibody        | -       | CAC   | NU-07-005     |
| Anti N-syndecan Polyclonal Antibody               | -       | CAC   | NU-07-004     |
| Anti BPAG1(BP230) Monoclonal Antibody             | 279     | CAC   | NU-01-BP1     |
| Anti NG2 / CSPG4 Monoclonal Antibody              | 2164H5  | CAC   | PRPG-NG-M01   |
| Anti COMP Monoclonal Antibody                     | 484D1   | CAC   | PRPG-CP-M01   |
| Anti COMP Monoclonal Antibody                     | 490D11  | CAC   | PRPG-CP-M02   |
| Anti Keratan sulfate Monoclonal Antibody          | 373E1   | CAC   | PRPG-KS-M01   |
| Anti KS [Keratan Sulfate] Monoclonal Antibody     | 5DA     | CAC   | PRPG-BC-M01   |
| Anti Decorin Monoclonal Antibody                  | 889C7   | CAC   | PRPG-DC-M01   |
| Anti Fibromodulin Monoclonal Antibody             | 636B12  | CAC   | PRPG-FBM-M01  |
| Anti Biglycan Monoclonal Antibody                 | 905A7   | CAC   | PRPG-BG-M01   |
| Anti XTP1 Monoclonal Antibody                     | 2191H1  | CAC   | PRPG-XTP-M01  |
| Anti SDP35 Monoclonal Antibody                    | 2200D12 | CAC   | PRPG-SDP-M01  |
| Anti Laminin $\alpha$ 4 Monoclonal Antibody       | 652C4   | CAC   | PRPG-LA4-M01  |
| Anti Laminin ALPHA3 Monoclonal Antibody           | BM515   | CAC   | NU-01-LA3     |
| Anti Collagen 7 Monoclonal Antibody               | BML39   | CAC   | NU-01-CO7     |
| Anti Collagen 12 Monoclonal Antibody              | 378D5   | CAC   | PRPG-CO12-M01 |

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