



## MONOCLONAL ANTIBODY

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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.

<b>Product type</b>	Primary antibody
<b>Immunogen</b>	Oversulfated oligosaccharides in Keratan Sulfate glycosaminoglycan chains. 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>Source</b>	Serum containing culture supernatant
<b>Purification</b>	-
<b>Buffer</b>	0.01M Tris-saline containing 0.02% NaN3 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. Store below -20°C (below -70°C for prolonged storage). Aliquot to avoid repeated cycles of freeze/thawing.
<b>Other</b>	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>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-acetyllactosamine 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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