Product Datasheet

Aggrecan Antibody (CS-56)
NB120-11570

Unit Size: 0.1 ml

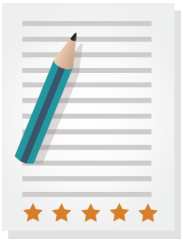
Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

www.novusbio.com technical@novusbio.com

Publications: 11

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB120-11570

Updated 7/28/2024 v.20.1



NB120-11570

Aggrecan Antibody (CS-56)

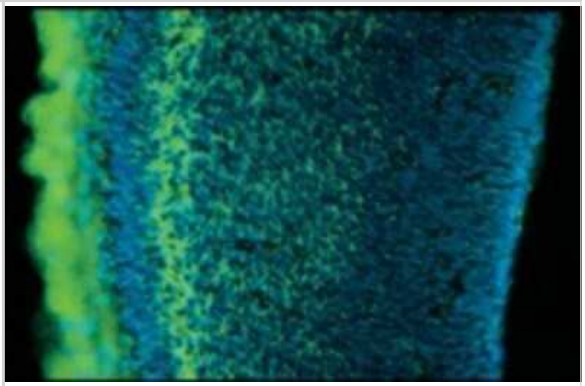
Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	CS-56
Preservative	0.9% Sodium Azide
Isotype	IgM
Purity	Unpurified
Buffer	Ascites

Product Description	
Host	Mouse
Gene ID	176
Gene Symbol	ACAN
Species	Human, Mouse, Rat, Porcine, Bovine, Chicken, Rabbit
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information. Rabbit reactivity reported in scientific literature (PMID:33032177).
Marker	Chondrocyte Marker
Specificity/Sensitivity	The antibody has been reported to be specific for the glycosaminoglycan (GAG) portion of native chondroitin sulfate proteoglycan (CSPG). The antibody reacts specifically with chondroitin sulfate types A and C but not with type B (dermatan sulfate), and may be used for localization of chondroitin sulfate in tissues and cultured fibroblasts.
Immunogen	Ventral membranes of chicken gizzard fibroblasts.

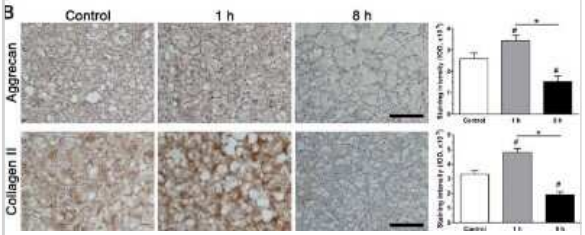
Product Application Details	
Applications	Western Blot, Electron Microscopy, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Microarray
Recommended Dilutions	Western Blot, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:200, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen 1:10-1:500, Electron Microscopy 1:10-1:500, Microarray

Images

Immunocytochemistry/Immunofluorescence: Aggrecan Antibody (CS-56) [NB120-11570] - Coronal section of the developing cerebral cortex of an embryonic day 16 rat stained with Monoclonal Anti-Chondroitin Sulfate followed by fluorescein labeled Goat Anti-Mouse Ig. The chondroitin sulfate proteoglycan (CSPG) is most concentrated in the pia matter and the sub-plate (bright green layers). There is moderate staining in the intermediate zone, and there is very little CSPG in the cortical plate and ventricular zone. Data supplied by B. Miller, Washington Univ. School of Medicine, St. Louis, MO.

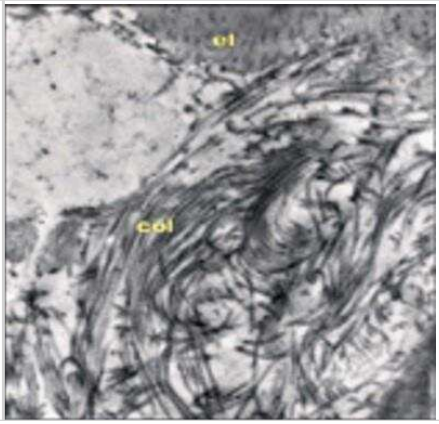


Immunohistochemistry: Aggrecan Antibody (CS-56) [NB120-11570] - Long-term load duration decreased expression of NP matrix macromolecules in porcine disc NP cells. Immunohistochemistry staining of aggrecan and collagen II. Magnification: 200x, scale =100 um. The results showed that long-term load duration (8 h per day) significantly decreased gene expression of matrix molecules (aggrecan and collagen II) and their protein deposition within the NP tissue compared with the short-term load duration (1 h per day) and the control (non-compression). Data are expressed as the means +/- S.D., n=3. #: indicates a significant difference (P<0.05) when compared with the control group. *: indicates a significant difference between two groups (P<0.05). Image collected and cropped by CiteAb from the following publication (https://portlandpress.com/bioscirep/article-lookup/doi/10.1042/BSR20160582) licensed under a CC-BY license.



Immunohistochemistry-Frozen: Aggrecan Antibody (CS-56) [NB120-11570] - staining of a frozen section of normal rabbit aorta. Data supplied by Z. Gallis, McGill University, Montreal.

Electron Microscopy: Aggrecan Antibody (CS-56) [NB120-11570] - Normal rabbit aorta, Lowicryl K4M thin section, stained with Monoclonal Anti-Chondroitin Sulfate (NB120-11570) and Goat Anti-Mouse IgM (u-chain specific) 10 nm gold. Counterstain was uranyl acetate and Reynold's lead citrate. Magnification 44,600x. (el=Elastin, col=Collagen). Data supplied by Z. Gallis, McGill University, Montreal.



Publications

Li P, Gan Y et al. 17beta-estradiol Attenuates TNF-alpha-Induced Premature Senescence of Nucleus Pulposus Cells through Regulating the ROS/NF-kapa B Pathway. Int J Biol Sci 2017-04-03 [PMID: 28255267] (ICC/IF, Rat)

Xu J, Fang Q, Liu Y et al. In situ ornamenting poly(epsilon-caprolactone) electrospun fibers with different fiber diameters using chondrocyte-derived extracellular matrix for chondrogenesis of mesenchymal stem cells Colloids Surf B Biointerfaces 2020-10-01 [PMID: 33032177] (ICC/IF, Rabbit)

Zhan JW, Wang SQ, Feng MS et al. Constant compression decreases vascular bud and VEGFA expression in a rabbit vertebral endplate ex vivo culture model PLoS ONE 2020-06-25 [PMID: 32584845] (IF/IHC, Rabbit)

Jiang Y, Fu L, Song Y. Responses of apoptosis and matrix metabolism of annulus fibrosus cells to different magnitudes of mechanical tension in vitro Biosci. Rep. 2019-02-28 [PMID: 30700570] (WB, Rat)

Shi J, Pang L, Jiao S. The response of nucleus pulposus cell senescence to static and dynamic compressions in a disc organ culture. Biosci. Rep. 2018-04-27 [PMID: 29437905] (IHC-P, Porcine)

Zhou H, Shi J, Zhang C, Li P. Static compression down-regulates N-cadherin expression and facilitates loss of cell phenotype of nucleus pulposus cells in a disc perfusion culture. Biosci. Rep. 2018-02-28 [PMID: 29273678] (IF/IHC, Porcine)

Gan Y, Li P, Wang L et al. An interpenetrating network-strengthened and toughened hydrogel that supports cell-based nucleus pulposus regeneration. Biomaterials 2017-08-01 [PMID: 28505597]

Li P, Zhang R, Wang L et al. Long-term load duration induces N-cadherin down-regulation and loss of cell phenotype of nucleus pulposus cells in a disc bioreactor culture. Biosci. Rep. 2017-04-30 [PMID: 28351894] (WB, Porcine)

Details:
This aggrecan antibody was used to examine the effect long term load on the expression of NP matrix molecules in pig disc NP cells.

Li P, Shi R, Chen D et al. Surgical removal and controlled trypsinization of the outer annulus fibrosus improves the bioactivity of the nucleus pulposus in a disc bioreactor culture. BMC Musculoskelet Disord 2016-03-22 [PMID: 27000557]

Li P, Gan Y, Xu Y et al. Matrix homeostasis within the immature annulus fibrosus depends on the frequency of dynamic compression: a study based on the self-developed mechanically active bioreactor. Biomech Model Mechanobiol 2016-09-02 [PMID: 27590020] (IF/IHC)

Li P, Gan Y, Wang H et al. Biological Responses of the Immature Annulus Fibrosus to Dynamic Compression in a Disc Perfusion Culture Cells Tissues Organs. 2016-07-15 [PMID: 27415834]

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB120-11570

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications