Product Datasheet

Aggrecan Neoepitope Antibody - BSA Free NB100-74350

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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NB100-74350

Aggrecan Neoepitope Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.1% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS and 30% Glycerol
Target Molecular Weight	61 kDa
Product Description	
Host	Rabbit
Gene ID	176
Gene Symbol	ACAN
Species	Human, Mouse, Rat, Porcine, Bovine, Canine
Specificity/Sensitivity	Aggrecan Neo (JSCNIT)
Immunogen	A synthetic peptide corresponding to a region of human Aggrecan (within residues 350-400). [UniProt# P16112]
Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry- Paraffin
Recommended Dilutions	Western Blot 1:1000, Flow Cytometry reported in scientific literature (PMID 21482542), Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:20-1:100, Immunohistochemistry-Paraffin 1:1000, Immunohistochemistry-Frozen reported in scientific literature (PMID 21482542)
Application Notes	In WB a band is detected at ~61 kDa representing the neoepitope sequence (NITEGE) generated by aggrecanase-mediated cleavage at Glu373-Ala374 of aggrecan core proteins.







Publications

Sheng-Long Ding, Tai-Wei Zhang, Qi-Chen Zhang, Wang Ding, Ze-Fang Li, Guan-Jie Han, Jin-Song Bai, Xi-Lei Li, Jian Dong, Hui-Ren Wang, Li-Bo Jiang Excessive mechanical strain accelerates intervertebral disc degeneration by disrupting intrinsic circadian rhythm Experimental & Molecular Medicine 2021-12-21 [PMID: 34934193]

Fu, W;Vasylyev, D;Bi, Y;Zhang, M;Sun, G;Khleborodova, A;Huang, G;Zhao, L;Zhou, R;Li, Y;Liu, S;Cai, X;He, W;Cui, M;Zhao, X;Hettinghouse, A;Good, J;Kim, E;Strauss, E;Leucht, P;Schwarzkopf, R;Guo, EX;Samuels, J;Hu, W;Attur, M;Waxman, SG;Liu, CJ; Nav1.7 as a chondrocyte regulator and therapeutic target for osteoarthritis Nature 2024-01-03 [PMID: 38172636]

Shaw A, TOth B, Arianti R Et al. BMP7 increases UCP1-dependent and independent thermogenesis with a unique gene expression program in human neck area derived adipocytes Pharmaceuticals 2021-09-28 [PMID: 34832860]

Song J, Kim EH, Yang JH et al. Upregulated FOXM1 stimulates chondrocyte senescence in Acot12-/-Nudt7-/- double knockout mice Theranostics 2023-09-25 [PMID: 37908734] (IHC-P, Mouse)

Dong R, Xu H, Wang P et al. Disruption of Col9a2 expression leads to defects in osteochondral homeostasis and osteoarthritis-like phenotype in mice Journal of Orthopaedic Translation 2023-08-14 [PMID: 37635809] (Immunohistochemistry, Immunocytochemistry/ Immunofluorescence)

Liu NQ, Lin Y, Li L et al. gp130/STAT3 signaling is required for homeostatic proliferation and anabolism in postnatal growth plate and articular chondrocytes Communications Biology 2022-01-17 [PMID: 35039652] (Immunohistochemistry)

Xiong B, Chen L, Huang Y et al. ZBTB16 eases lipopolysaccharide?elicited inflammation, apoptosis and degradation of extracellular matrix in chondrocytes during osteoarthritis by suppressing GRK2 transcription Experimental and Therapeutic Medicine 2023-04-24 [PMID: 37206562] (WB)

Shaw A Thermogenic regulation of human abdominal and neck area derived adipocytes by mitophagy, irisin and BMP 7 Thesis 2022-01-01 (WB, Human)

Details:

Dilution used for WB 1:1001

Cui S, Li W, Teixeira G et al. Neoepitope fragments as biomarkers for different phenotypes of intervertebral disc degeneration JOR SPINE 2022-07-06 [PMID: 36203866]

Xu H, Dong R, Zeng Q et al. Col9a2 gene deletion accelerates the degeneration of intervertebral discs Experimental and Therapeutic Medicine 2022-01-07 [PMID: 35126710] (ICC/IF, IF/IHC, Mouse)

Weber, A E, Jalali, O Et al. Modulation of Hedgehog Signaling by Kappa Opioids to Attenuate Osteoarthritis. Arthritis Rheumatol 2020-08-01 [PMID: 32249508] (FLOW, Human)

Details:

Citation using the Alexa Fluor 405 format of this antibody.

Oh Hk, Park M, Choi Sw Et Al. Suppression of Osteoarthritis progression by post-natal Induction of Nkx3.2 Biochemical and biophysical research communications 2021-07-27 [PMID: 34330063]

More publications at http://www.novusbio.com/NB100-74350

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Procedures

Western Blot protocol for Aggrecan Neoepitope Antibody (NB100-74350)

Western Blot Protocol

1. Perform SDS-PAGE (4-12% MOPS) on samples to be analyzed, loading 35 ug of total protein per lane.

2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.

3. Rinse membrane with dH2O and then stain the blot using Ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.

4. Rinse the blot in TBS for approximately 5 minutes.

5. Block the membrane using 5% NFDM + 1% BSA in TBS + Tween, 1 hour at RT.

6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.

7. Dilute the rabbit anti-ACAN primary antibody (NB100-74350) in blocking buffer and incubate 1 hour at room temperature.

8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.

9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.

10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).

11. Apply the detection reagent of choice in accordance with the manufacturers instructions (Pierce ECL). Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.







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Products Related to NB100-74350

NB100-74350PEP	Aggrecan Neoepitope Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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.

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