

Product Datasheet

MMP-2 Antibody (8B4) - (Pro and Active) - BSA Free NB200-114

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NB200-114

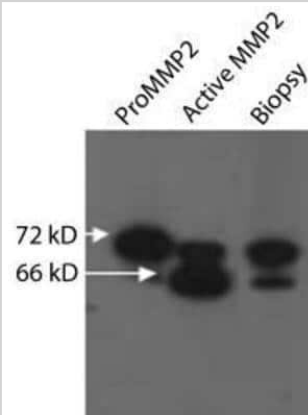
MMP-2 Antibody (8B4) - (Pro and Active) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	8B4
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Product Description	
Description	Novus Biologicals Mouse MMP-2 Antibody (8B4) - (Pro and Active) - BSA Free (NB200-114) is a monoclonal antibody validated for use in IHC, WB, ELISA, ICC/IF, Simple Western and IP. Anti-MMP-2 Antibody: Cited in 24 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	4313
Gene Symbol	MMP2
Species	Human, Mouse
Specificity/Sensitivity	This is specific for pro and active MMP2.
Immunogen	Activated recombinant human MMP-2. [Uniprot: P08253]
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Knockdown Validated
Recommended Dilutions	Western Blot 1-2ug/ml, Simple Western 1:50, ELISA 0.03 ug/ml, Immunohistochemistry 2 ug/ml, Immunocytochemistry/ Immunofluorescence 1:10 -1:500, Immunoprecipitation, Immunohistochemistry-Paraffin 2 ug/ml, Immunohistochemistry-Frozen 2ug/ml, Knockdown Validated reported in scientific literature (PMID 31439546)
Application Notes	In Western blot, a band is seen at 70 and 62kDa representing the MMP2 band-pair. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

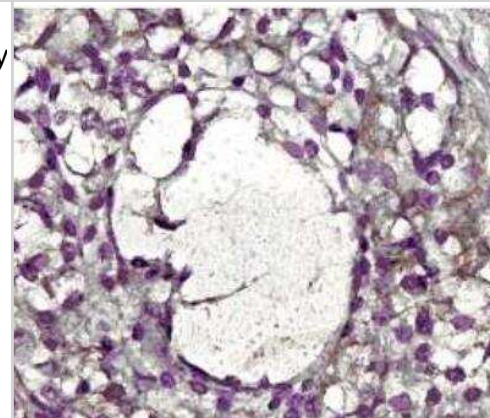


Images

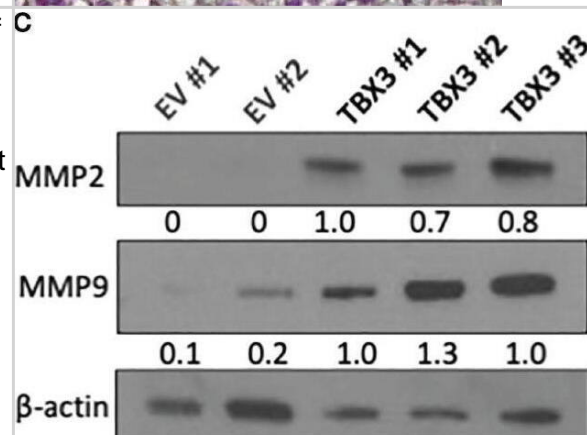
Western Blot: MMP-2 Antibody (8B4) - (Pro and Active) [NB200-114] - Analysis of MMP2 expression in ProMMP2 (1), Active MMP2 (2) and human pressure ulcer biopsy (3).



Immunohistochemistry-Paraffin: MMP-2 Antibody (8B4) - (Pro and Active) [NB200-114] - Detection of MMP-2 staining in FFPE human ovary tissue. Primary antibody was used at 2.5 ug/ml with the avidin-biotin-peroxidase detection method.



TBX3 promotes 3D spheroid invasion. (A) 3D spheroid invasion assay of EV and TBX3 hMSCs. Representative images of the 3D invading spheroids at 0, 24 and 48 h. (40X; EVOS M5000 Imaging System; scale bars = 600 um). (B) Quantification of the invasive area. Student's t-test was used to compare between groups, *** $p < 0.001$; error bars represent mean \pm SEM (n=3). (C) Western blot analysis of MMP2 and MMP9 expression in 3D hMSC spheroids (n=2). For western blotting β -actin was used as a loading control. Densitometry readings were obtained using Fiji and protein expression levels are represented as a ratio of protein of interest/ β -actin normalized to TBX3 #1. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35145908>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Gerwinn T, Salemi S, Schori LJ et al. Improved contractile potential in detrusor microtissues from pediatric patients with end stage lower urinary tract dysfunction *Frontiers in Cell and Developmental Biology* 2022-10-04 [PMID: 36268506] (Immunohistochemistry-Paraffin, Human)

Damerell V, Ambele MA, Salisbury S et al. The c-Myc/TBX3 Axis Promotes Cellular Transformation of Sarcoma-Initiating Cells *Frontiers in Oncology* 2022-01-25 [PMID: 35145908] (Immunohistochemistry-Paraffin, Human)

Lien CF, Lin CS, Shyue SK et al. Peroxisome proliferator-activated receptor γ improves the features of atherosclerotic plaque vulnerability by regulating smooth muscle cell phenotypic switching *British journal of pharmacology* 2023-03-21 [PMID: 36942453]

Debarpan Mitra, Depanwita Saha, Gaurav Das, Rimi Mukherjee, Samir Banerjee, Neyaz Alam, Saunak Mitra Mustafi, Partha Nath, Anuj Majumder, Biswanath Majumder, Nabendu Murmu Lupeol synergizes with 5-fluorouracil to combat c-MET/EphA2 mediated chemoresistance in triple negative breast cancer *iScience* 2023-11-04 [PMID: 38047085]

Depanwita Saha, Debarpan Mitra, Neyaz Alam, Sagar Sen, Saunak Mitra Mustafi, Pradip K Majumder, Biswanath Majumder, Nabendu Murmu Lupeol and Paclitaxel cooperate in hindering hypoxia induced vasculogenic mimicry via suppression of HIF-1 α -EphA2-Laminin-5 γ 2 network in human oral cancer. *Journal of cell communication and signaling* 2023-09-01 [PMID: 36063341]

Thuy Nguyen Thi, Hien Duong Thanh, Van-Tan Nguyen, Se-Young Kwon, Changjong Moon, Eu Chang Hwang, Chaeyong Jung Complement regulatory protein CD46 promotes bladder cancer metastasis through activation of MMP9 *International Journal of Oncology* 2024-07-01 [PMID: 38847230]

Sun DP, Huang HY, Chou CL et al. Punicalagin is cytotoxic to human colon cancer cells by modulating cell proliferation, apoptosis, and invasion *Human & experimental toxicology* 2023-11-07 [PMID: 37933160] (WB, Human)

Neff LS, Zhang Y, Van Laer AO et al. Mechanisms that limit regression of myocardial fibrosis following removal of left ventricular pressure overload *American journal of physiology. Heart and circulatory physiology* 2022-07-01 [PMID: 35657618]

DIACONU GS, MIHALACHE CG, POPESCU G Clinical and pathological considerations in lumbar herniated disc associated with inflammatory lesions *rjme.ro* 2021-01-01 [PMID: 35673814] (IF/IHC, Human)

PREDA SA, PREDESCU AM, STOICA LE Histopathological and immunohistochemical changes of the marginal periodontium in patients with Turner syndrome changes 2021-01-01 [PMID: 34609427] (IF/IHC, Human)

Betsou A, Lambropoulou M, Georgakopoulou AE et al. The hepatoprotective effect of silibinin after hepatic ischemia/reperfusion in a rat model is confirmed by immunohistochemistry and qRT-PCR *The Journal of pharmacy and pharmacology* 2021-04-13 [PMID: 33847359]

Perek B, Kowalska K et al. Infiltration of CD68+ cells correlates positively with matrix metalloproteinase 2 expression in the arteries used as aortocoronary bypass grafts. Possible clinical implications. *Cardiol J* 2019-06-09 [PMID: 31489609] (IF/IHC, Human)

More publications at <http://www.novusbio.com/NB200-114>



Procedures

IHC (Paraffin) Protocol Specific for MMP2 Antibody (NB200-114)

For IHC on Paraffin-Embedded Tissue Sections:

1. Deparaffinize in xylene. 3 changes at 10 min each.
2. Hydrate in 100% EtOH for 5 min (2X).
3. Quench endogenous peroxidase. 30 min in 1% H₂O₂ in methanol. (Make fresh each time: 6 ml 30% H₂O₂+ 194 ml methanol).
4. Hydrate to H₂O in graded alcohols.
 - a. 5 min in 95%.
 - b. 5 min in 70%
 - c. 5 min in distilled H₂O.
5. Perform antigen retrieval (Antigen Retrieval; Dako #S1700) with heating as described by manufacturer. Fill plastic Coplin jar with 50 ml Antigen Retrieval buffer. Add slides to jar when temperature reaches 95-99C start timing. Heat for 30 min. After heating, let slides cool in jar for 15 min.
6. Wash slides in PBS for 5 min (2x).
7. Infiltrate sections with PBS + 0.5% Triton X100 for 10 min, then rinse twice in PBS.
8. Block for 1 hr. at room temp in Blocking buffer- (PBS + 10% goat serum).
9. Aspirate blocking buffer. Apply MMP2/8B4 IgG diluted to 5 ug/ml in Blocking buffer. Incubate overnight at 4C (or >2 hr at 37C).
10. Rinse 3X in PBS for 10 min each.
11. Apply 2 degrees antibody. Dilute biotin conjugated goat anti-mouse 1:500 (Dako # E0433) in Blocking buffer.
12. Incubate for 2 hr. at room temperature.
13. Rinse 3X in PBS for 10 min each.
14. Prepare Avidin-biotin-peroxidase by combining each component at 1:50 in PBS + 0.1% Triton X100. Gently mix and react for 30 min. Prior to use, dilute the complexed mixture 1:5 with PBS + 0.1% BSA. Apply to sections and incubate for 2 hr at room temp.
15. Rinse in 3X in PBS for 15 min each.
16. Develop with DAB. Dissolved 1.5 mg diaminobenzidine-(HCl)₄ in 3 ml of PBS, then add 2 ul of 30% hydrogen peroxide. Filter through a 0.2 um filter immediately before use. Develop for 15 min.
17. Rinse in water for 5 min. Counterstain for nuclei (e.g., hematoxylin) as desired.
18. Dehydrate through graded ethanol, clear in 100% ethanol and xylene (1:1 solution) and then 100% xylene. Coverslip with Permount.





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Products Related to NB200-114

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

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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