Product Datasheet

S100A9 Antibody
NB110-89726

Unit Size: 0.1 ml

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

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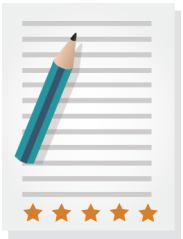
Updated 2/17/2025 v.20.1



NB110-89726

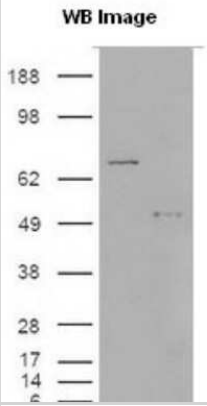
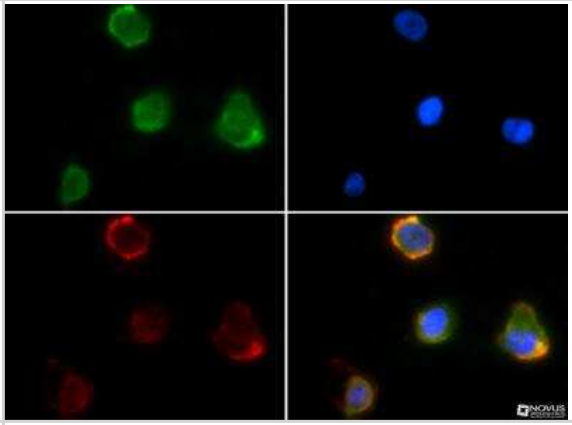
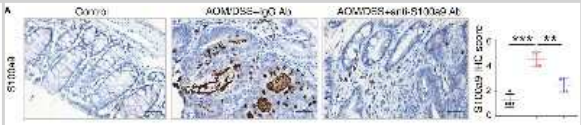
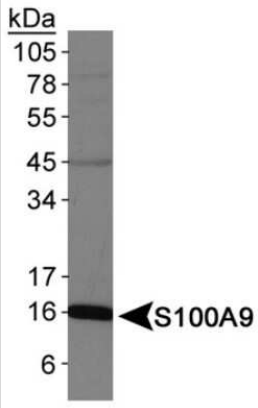
S100A9 Antibody

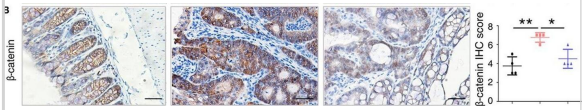
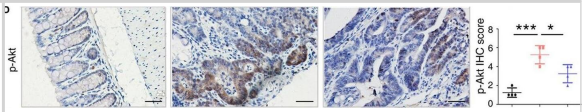
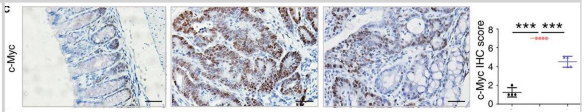
Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.1% Sodium Azide
Isotype	IgG
Purity	Unpurified
Buffer	Whole antisera
Target Molecular Weight	16 kDa

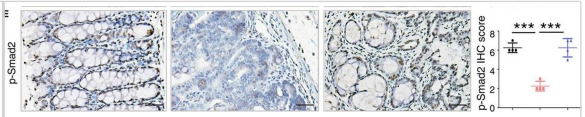
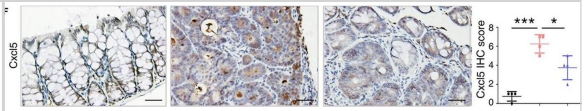
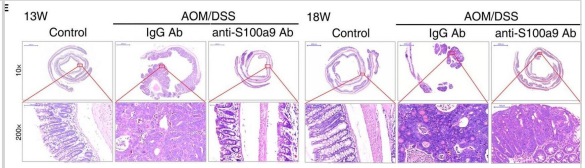
Product Description	
Host	Rabbit
Gene ID	6280
Gene Symbol	S100A9
Species	Human, Mouse, Rat
Immunogen	Full length human S100A9 protein [Swiss-Prot# P06702] expressed in E. coli.

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:100, Immunohistochemistry reported in scientific literature (PMID 25792748), Immunocytochemistry/ Immunofluorescence 1:50-1:200, Immunohistochemistry-Paraffin reported in scientific literature (PMID 21653680)
Application Notes	In Western blot, a band is seen at approx. 16 kDa. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Human PBMC's lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100. Separated by Size-Wes, Sally Sue/Peggy Sue. 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.

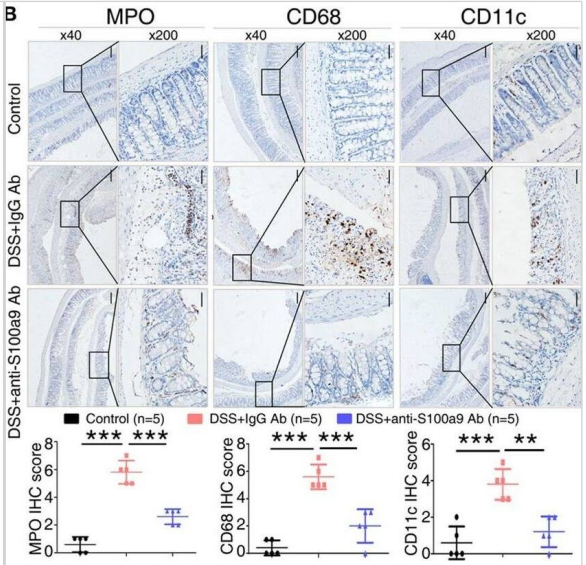
Images

Western Blot: S100A9 Antibody [NB110-89726] - Cells were transfected with the pCMV6-ENTRY S100A9 cDNA or the pCMV6-ENTRY control for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-S100A9.	
Immunocytochemistry/Immunofluorescence: S100A9 Antibody [NB110-89726] - S100A9 antibody was tested in A431 cells with FITC (green). Nuclei and alpha-tubulin were counterstained with Dapi (blue) and Dylight 550 (red).	
Immunohistochemistry-Paraffin: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200x magnification) of S100a9, in normal control, IgG Ab, and anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 um. Staining scores were determined by semi-quantitative optical analysis. Image collected and cropped by CiteAb from the following publication (https://journal.frontiersin.org/article/10.3389/fimmu.2017.01774/full), licensed under a CC-BY license.	
Western Blot: S100A9 Antibody [NB110-89726] - Analysis of S100A9 Antibody in DMSO treated HL60 whole cell lysates.	

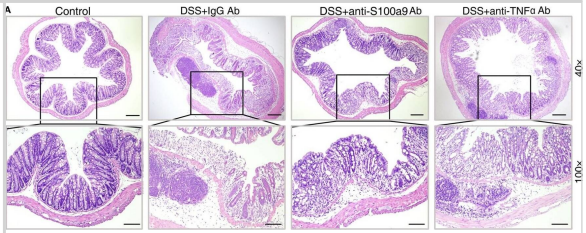
Simple Western: S100A9 Antibody [NB110-89726] - Simple Western lane view shows a specific band for S100A9 in 0.5 mg/ml of Human PBMC's lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200× magnification) of (A) S100a9, (B) β-catenin, (C) c-Myc, (D) p-Akt, (E) p-Smad2, & (F) Cxcl5 in normal control, IgG Ab, & anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 μm. Staining scores were determined by semi-quantitative optical analysis. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200× magnification) of (A) S100a9, (B) β-catenin, (C) c-Myc, (D) p-Akt, (E) p-Smad2, & (F) Cxcl5 in normal control, IgG Ab, & anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 μm. Staining scores were determined by semi-quantitative optical analysis. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200× magnification) of (A) S100a9, (B) β-catenin, (C) c-Myc, (D) p-Akt, (E) p-Smad2, & (F) Cxcl5 in normal control, IgG Ab, & anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 μm. Staining scores were determined by semi-quantitative optical analysis. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Immunohistochemistry: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200× magnification) of (A) S100a9, (B) β-catenin, (C) c-Myc, (D) p-Akt, (E) p-Smad2, & (F) Cxcl5 in normal control, IgG Ab, & anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 μm. Staining scores were determined by semi-quantitative optical analysis. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Key molecules of specific signaling pathways are assayed by immunohistochemistry in the colorectum of mice. Immunohistochemistry (200× magnification) of (A) S100a9, (B) β-catenin, (C) c-Myc, (D) p-Akt, (E) p-Smad2, & (F) Cxcl5 in normal control, IgG Ab, & anti-S100a9 Ab-treated colorectal tissues of the colitis-associated cancer mouse (n = 4). Scale bar, 50 μm. Staining scores were determined by semi-quantitative optical analysis. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Effects of anti-S100a9 Ab administration on the azoxymethane (AOM)/dextran sulfate sodium (DSS)-induced colitis-associated cancer development. (A) Experimental procedure of the control group & the AOM/DSS group treated with IgG Ab or anti-S100a9 Ab. (B) DAI of the IgG Ab or anti-S100a9 Ab-treated AOM/DSS mice & normal controls. (C) General observation of the colorectums in mice at the end of the 13th & 18th week. (D) Colon length, tumor rate, & number of macroscopic neoplasms were statisticed at 13 & 18 weeks, individually. n = 5–9 per group. Results were representative of the three experiments performed. (E) Histopathological examination of colon sections was shown under the Pannoramic Viewer (H&E staining, upper panels: original magnification 10×, scale bar: 2000 μm; lower panels: original magnification 200×, scale bar: 100 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

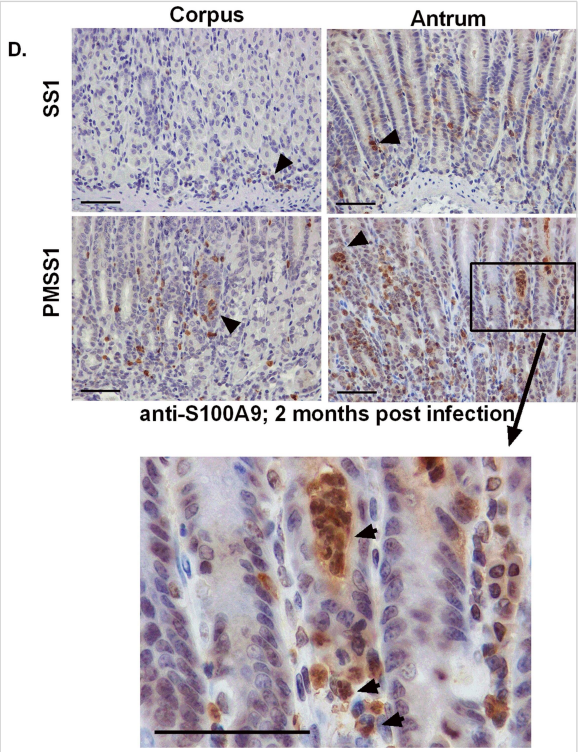
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Effects of anti-S100a9 Ab on the frequency of neutrophils, macrophages, & dendritic cells (DCs) in the colon of the dextran sulfate sodium (DSS) mouse model. (A) Colon lamina propria cells were isolated from normal control & IgG Ab or anti-S100a9 Ab-treated DSS mice at day 6 post-DSS colitis induction. Frequencies of neutrophils, macrophages, & DCs in the colon were determined by flow cytometry. Cells were gated on CD45+CD3−CD4−CD11b+Ly6G+, CD45+CD3−CD4−CD11b+F4/80+, & CD45+CD3−CD4−CD11b+CD11c+ populations respectively. Representative flow cytometric figures were shown. The percentage of cells was presented as the mean ± SEM of four to six individual mice per group. *p < 0.05 in a one-way analysis of variance followed by Bonferroni correction. Data were representative of three independent experiments. (B) Immunohistochemical staining of myeloperoxidase (MPO), CD68, & CD11c proteins in the normal control & IgG Ab or anti-S100a9 Ab-treated colitis mice at day 6 (left panels: original magnification 40×, scale bar: 200 μm; right panels: original magnification 200×, scale bar: 50 μm). Staining scores were counted. One-way analysis of variance followed by Bonferroni correction. Results were representative of the three experiments performed. Error bars represent SD. (C) Expression of S100a9, Tnfα, Il1β, Il6, Il17a, Ifnγ, Il12a, Il23a, Il4, & Il10 mRNA, as assessed by quantitative real-time PCR in normal control & IgG Ab, or anti-S100a9 Ab-treated colitis tissues. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



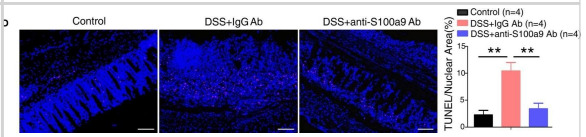
Immunohistochemistry: S100A9 Antibody [NB110-89726] - Anti-S100a9 Ab ameliorates inflammatory response of dextran sulfate sodium (DSS)-induced colitis in mice. (A) 6 days after DSS treatment, representative H&E-stained colon sections were shown (upper panels: original magnification 40×, scale bar: 200 μm; lower panels: original magnification 100×, scale bar: 100 μm). (B) Colon inflammation, ulceration, & crypt damage were scored individually, & composite total score was scored. n = 5 per group. (C) Isolated lymphoid follicles (ILFs) area was measured at day 6. Representative TUNEL staining (D) & ethynyl-2′-deoxyuridine (EdU) staining (E) of normal mice & DSS-induced mice, which were treated with IgG Ab or anti-S100a9 Ab on day 6. The percent of positive cells was measured. At least six fields were counted per mouse. Scale bar, 100 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunohistochemistry: S100A9 Antibody [NB110-89726] - Host CP (S100A8/A9) is elevated in H. pylori infected stomach tissue.A) s100a8/s100a9 transcript abundance in RNA extracted from C57BL/6 mice infected with H. pylori PMSS1 or SS1 for 1, 2, or 3 months relative to uninfected animals as determined by real-time RT-PCR analysis. Points indicate mean relative units of transcript abundance +/− SEM (levels of s100a8 in PMSS1-infected mice compared to uninfected mice; 1 mo p=0.0511; 2 mo p=0.0432; 3 mo p=0.0127; levels of s100a8 in SS1-infected mice compared to uninfected mice at 2 mo p=0.0623 Student's t test). (B) Inflammation scores of H. pylori infected mice at 1, 2, & 3 months post infection. (C) s100a8/s100a9 transcript abundance in RNA extracted from gastric biopsies derived from human patients, which were either H. pylori-positive or H. pylori-negative (s100a8 p=0.15; s100a9 *p=0.05). Bars indicate mean relative units of transcript abundance +/− SEM. Each experimental group represents≥5 individuals (mice or human samples). D) Gastric samples derived from H. pylori PMSS1-infected WT mice or SS1-infected WT mice at 2 months post-infection were analyzed via immunohistochemistry using a polyclonal antibody to S100A9 (scale bars are 50 microns). E) Real-time RT-PCR was performed on gastric tissue to quantify s100a8 & s100a9 transcript abundance from WT (C57BL/6 mice) & IL-17RA-/- mice infected with PMSS1. Data represent relative units of transcript abundance +/− SEM in WT mice & IL-17RA-/- mice, *p=0.0169 & p=0.0143, respectively. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/25330071), licensed under a CC0-1.0 license. Not internally tested by Novus Biologicals.



Immunohistochemistry: S100A9 Antibody [NB110-89726] - Anti-S100a9 Ab ameliorates inflammatory response of dextran sulfate sodium (DSS)-induced colitis in mice. (A) 6 days after DSS treatment, representative H&E-stained colon sections were shown (upper panels: original magnification 40×, scale bar: 200 μm; lower panels: original magnification 100×, scale bar: 100 μm). (B) Colon inflammation, ulceration, & crypt damage were scored individually, & composite total score was scored. n = 5 per group. (C) Isolated lymphoid follicles (ILFs) area was measured at day 6. Representative TUNEL staining (D) & ethynyl-2′-deoxyuridine (EdU) staining (E) of normal mice & DSS-induced mice, which were treated with IgG Ab or anti-S100a9 Ab on day 6. The percent of positive cells was measured. At least six fields were counted per mouse. Scale bar, 100 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29326691), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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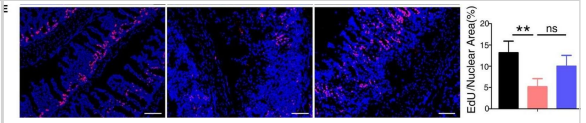

Publications

Luckett, T;Abudula, M;Ireland, L;Glenn, M;Bellomo, G;Stafferton, R;Halloran, C;Ghaneh, P;Jones, R;Schmid, MC;Mielgo, A; Mesothelin Secretion by Pancreatic Cancer Cells Co-opts Macrophages and Promotes Metastasis Cancer research 2024-02-15 [PMID: 38356443]

Langle YV, Balarino NP, Belgorosky D et Al. Effect of nitric oxide inhibition in Bacillus Calmette-Guerin bladder cancer treatment Nitric Oxide 2020-12-29 [PMID: 32147582]

Fong Ly, Taccioli C, Palamarchuk A et Al. Abrogation of esophageal carcinoma development in miR-31 knockout rats Proc. Natl. Acad. Sci. U.S.A. 2020-03-17 [PMID: 32123074]

Tae-Rin Kwon, Sung-Eun Lee, Jong Hwan Kim, You Na Jang, Su-Young Kim, Seok Kyun Mun, Chan Woong Kim, Jungtae Na, Beom Joon Kim 310 nm UV-LEDs attenuate imiquimod-induced psoriasis-like skin lesions in C57BL/6 mice and inhibit IL-22-induced STAT3 expression in HaCaT cells. Photochemical & photobiological sciences : Official journal of the European Photochemistry Association and the European Society for Photobiology 2020-12-21 [PMID: 32584352]

Ancey PB, Contat C, Boivin G et al. GLUT1 Expression in Tumor-Associated Neutrophils Promotes Lung Cancer Growth and Resistance to Radiotherapy Cancer Research 2021-05-01 [PMID: 33753374]

Manzanares LD, David J, Ren X et al. Atovaquone attenuates experimental colitis by reducing neutrophil infiltration of colonic mucosa Frontiers in Pharmacology 2022-10-14 [PMID: 36313299] (Immunohistochemistry)

Fong LY, Huebner K, Jing R et al. Zinc treatment reverses and anti-Zn-regulated miRs suppress esophageal carcinomas in vivo Proceedings of the National Academy of Sciences of the United States of America 2023-05-16 [PMID: 37155893]

Turchi R, Tortolici F, Benvenuto M et al. Low Sulfur Amino Acid, High Polyunsaturated Fatty Acid Diet Inhibits Breast Cancer Growth International Journal of Molecular Sciences 2022-12-23 (IHC-Fr, Mouse)

Yoshikawa T, Takeichi T, Hirabayashi T et al. IL-17 axis is a significant driver of skin inflammation in Card14 mutant pityriasis rubra pilaris model mice Research Square 2023-02-02 (IHC, Mouse)

Bui TM Dissecting the Diverse Phenotypes and Pathological Impacts of Neutrophils in Colitis-to-CRC Progression Thesis 2022-01-01

Zhang X, Wei L, et al. Suppression Colitis and Colitis-Associated Colon Cancer by Anti-S100a9 Antibody in Mice. Front Immunol 2018-01-13 [PMID: 29326691] (IF/IHC, Mouse)

Li Z, Zhang X, Liu C Et al. Macrophage-Biomimetic Nanoparticles Ameliorate Ulcerative Colitis through Reducing Inflammatory Factors Expression Journal of innate immunity 2021-11-01 [PMID: 34724662] (IHC-P, Mouse)

More publications at http://www.novusbio.com/NB110-89726

Procedures

Western Blot protocol for S100A9 Antibody (NB110-89726)

Western Blot Protocol

1. Perform SDS-PAGE (4-12% MES) on samples to be analyzed, loading 40 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% 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-S100A9 primary antibody (NB 110-89726) 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 NB110-89726

NBL1-15660	S100A9 Overexpression Lysate
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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