

Product Datasheet

LMO2 Antibody (1A9-3B11) - BSA Free NB110-78626

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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NB110-78626

LMO2 Antibody (1A9-3B11) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	1A9-3B11
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	24 kDa

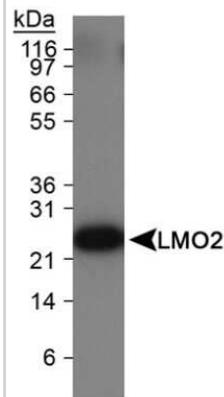
Product Description	
Description	Novus Biologicals Mouse LMO2 Antibody (1A9-3B11) - BSA Free (NB110-78626) is a monoclonal antibody validated for use in IHC, WB, Flow, IP and ChIP. Anti-LMO2 Antibody: Cited in 5 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	4005
Gene Symbol	LMO2
Species	Human, Mouse
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:34382935).
Immunogen	Recombinant human LMO2. [UniProt# P25791]

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunohistochemistry, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), ICC/IF (Negative)
Recommended Dilutions	Western Blot 0.5 ug/ml, Flow Cytometry 1-2 ug/ml per million cells, Immunohistochemistry 1:100-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:100-1:500, ICC/IF (Negative), Chromatin Immunoprecipitation (ChIP) 1:10-1:500
Application Notes	This LMO2 antibody is useful for Western blot, Immunoprecipitation, Chromatin Immunoprecipitation and Immunohistochemistry on paraffin-embedded sections. In WB a band can be seen at ~24 kDa. 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.

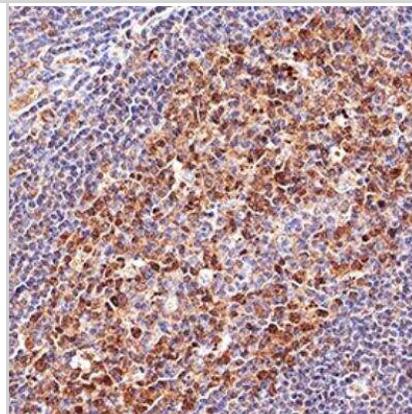


Images

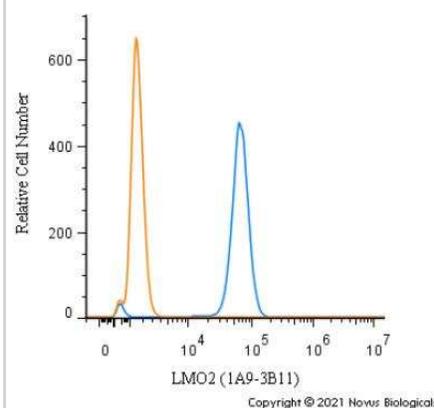
Western Blot: LMO2 Antibody (1A9-3B11) [NB110-78626] - Detection of LMO2 in Ramos cell lysate.



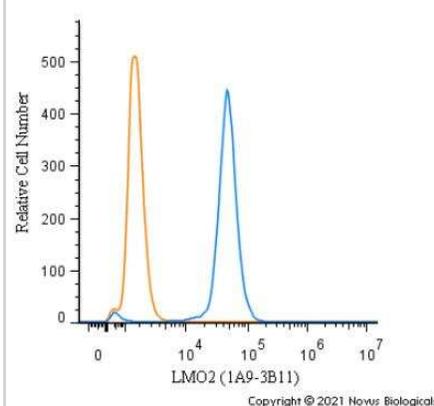
Immunohistochemistry-Paraffin: LMO2 Antibody (1A9-3B11) [NB110-78626] - IHC analysis of formalin fixed paraffin-embedded (FFPE) human tonsil using LMO2 antibody at 1:500 on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced antigen retrieval (HIER) using 10mM sodium citrate buffer (pH 6.0) and endogenous peroxidase quenching with peroxide block. The sections were incubated with primary antibody for 30 minutes and Bond Polymer Refine Detection (Leica Biosystems) with DAB was used for signal development followed by counterstaining with hematoxylin. Whole slide scanning and capturing of representative images was performed using Aperio AT2 (Leica Biosystems). Nuclear with some cytoplasmic staining was observed. Staining was performed by Histowiz.



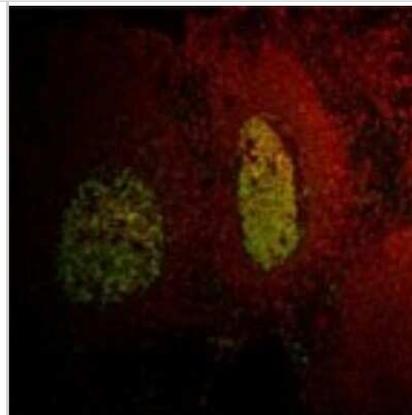
Flow Cytometry: LMO2 Antibody (1A9-3B11) [NB110-78626] - An intracellular stain was performed on Ramos cells with LMO2 Antibody (1A9-3B11) NB110-78626 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).



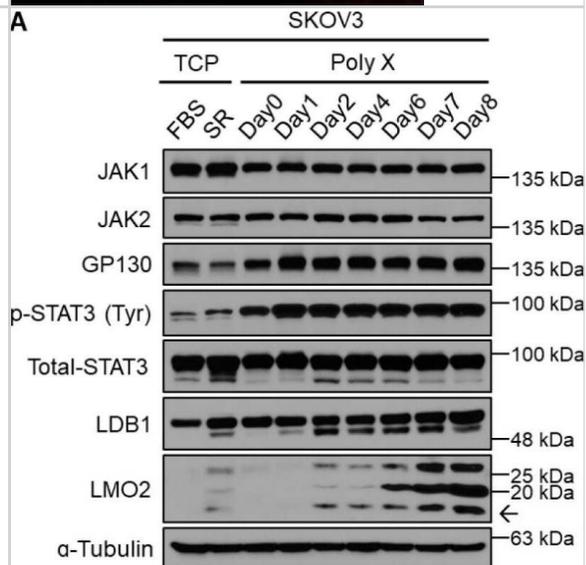
Flow Cytometry: LMO2 Antibody (1A9-3B11) [NB110-78626] - An intracellular stain was performed on THP-1 cells with LMO2 Antibody (1A9-3B11) NB110-78626 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).



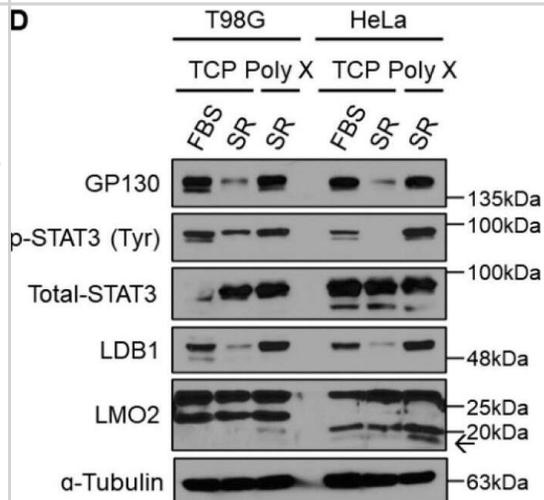
Immunohistochemistry: LMO2 Antibody (1A9-3B11) - BSA Free [NB110-78626] - Immunohistochemistry labeling of LMO2 (green) in tonsil tissue.



Long-term activation of STAT3 signaling via LMO2-LDB1 complex. (A) Cell lysates from SKOV3 cancer cells cultured on polymer X by date were immunoblotted with antibodies specific to JAK1, JAK2, GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. (B) Cell lysates from SKOV3 cancer cells transfected with either non-target siRNA or siLMO2, cultured on TCP or polymer X on days 4 and 8, were immunoblotted with antibodies specific to JAK1, JAK2, GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. (C) Cell lysates from SKOV3 cancer cells transfected with either non-target siRNA or siLDB1, cultured on TCP or polymer X on days 4 and 8, were immunoblotted with antibodies specific to JAK1, JAK2, GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. (D) Image obtained by culturing STAT3 GFP-negative cell line transfected with either non-target siRNA or siLMO2 and siLDB1, cultured on polymer X for 8 days using IncuCyte system. Scale bar, 200 μ m. The arrow means LMO2. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36359204>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



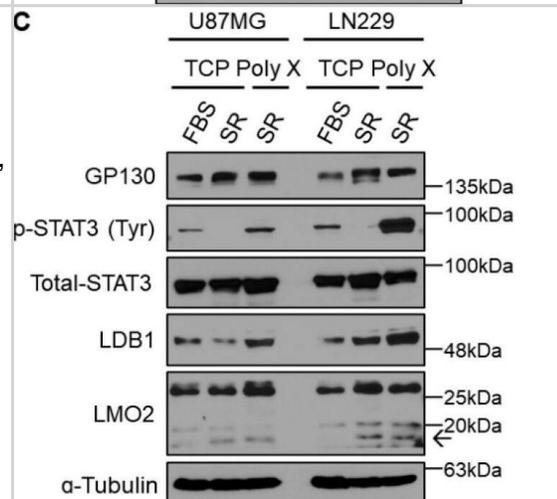
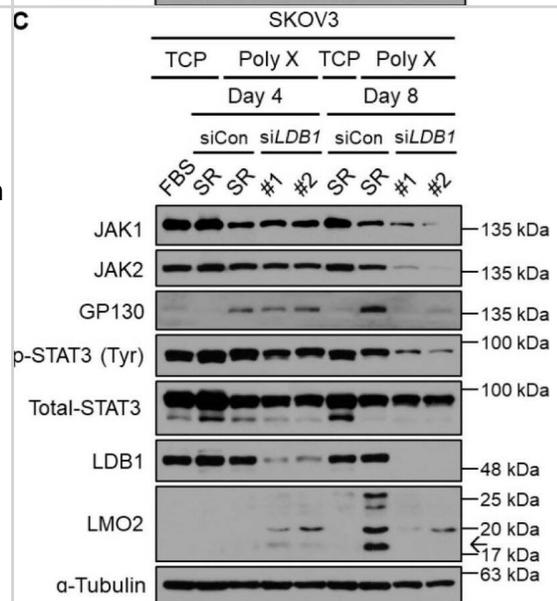
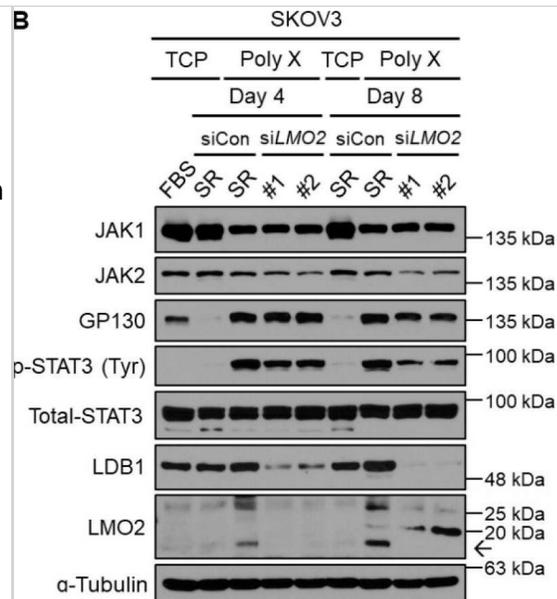
General application of polymer X using various cancer cell lines. (A) Images of tumor spheroids cultured in each indicated cell line on TCP or polymer X for 8 days. Scale bar, 40 μ m. (B) Cell lysates from A1207 and LN18 GBM cells cultured on TCP or polymer X for 8 days were immunoblotted with antibodies specific to GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. (C) Cell lysates from U87MG and LN229 GBM cells cultured on TCP or polymer X for 8 days were immunoblotted with antibodies specific to GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. (D) Cell lysates from T98G GBM cells and HeLa cells cultured on TCP or polymer X for 8 days were immunoblotted with antibodies specific to GP130, p-STAT3, total STAT3, LMO2, LDB1, and α -tubulin. The arrow means LMO2. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36359204>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



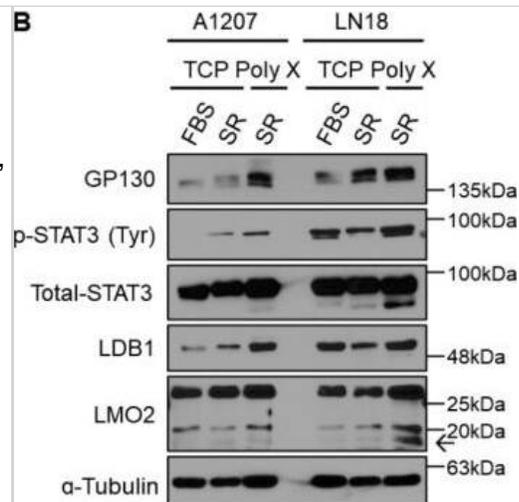
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Publications

Koizumi M, Kama Y, Hirano KI et al. Transcription factor Zbtb1 interacts with bridging factor Lmo2 and maintains the T-lineage differentiation capacity of lymphoid progenitor cells *Journal of Biological Chemistry* 2022-11-01 [PMID: 36126774] (Western Blot, Immunohistochemistry-Paraffin, Human)

Seo S, Hong N, Song J et al. Polymer Thin Film Promotes Tumor Spheroid Formation via JAK2-STAT3 Signaling Primed by Fibronectin-Integrin α 5 and Sustained by LMO2-LDB1 Complex *Biomedicines* 2022-10-24 [PMID: 36359204] (WB, Human)

Wang W, Meng Y, Chen Y et al. A comprehensive analysis of LMO2 pathogenic regulatory profile during T-lineage development and leukemic transformation *Oncogene* 2022-07-18 [PMID: 35851847] (Chemotaxis, Mouse)

Hirano KI, Hosokawa H, Koizumi M Et al. LMO2 is essential to maintain the ability of progenitors to differentiate into T-cell lineage in mice *eLife* 2021-08-12 [PMID: 34382935] (Chemotaxis, WB, Mouse)

Natkunam, Y et al. The oncoprotein LMO2 is expressed in normal germinal-center B cells and in human B-cell lymphomas. *Blood*;109(4):1636-42. 2007-02-15 [PMID: 17038524] (IHC-P, WB, Human)

Procedures

Western Blot protocol for LMO2 Antibody (NB110-78626)

LMO2 Antibody (1A9-3B11):

Western Blot Protocol

1. Perform SDS-PAGE (4-12% MOPS) 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% NFD_M + 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-LMO2 primary antibody (NB 110-78626) 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 mouse-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 NB110-78626

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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