

Product Datasheet

Laminin Antibody [Alexa Fluor® 647] NB300-144AF647

Unit Size: 0.1 ml

Store at 4C in the dark.

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NB300-144AF647

Laminin Antibody [Alexa Fluor® 647]

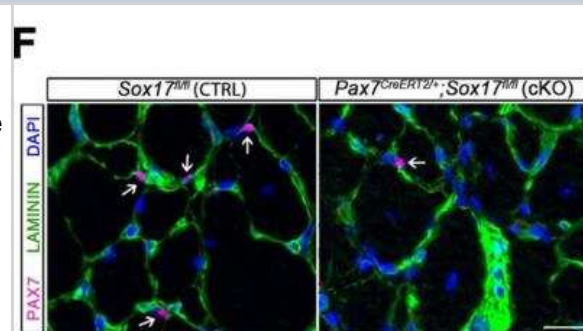
Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C in the dark.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Conjugate	Alexa Fluor 647
Purity	IgG purified
Buffer	50mM Sodium Borate
Product Description	
Host	Rabbit
Gene ID	284217
Gene Symbol	LAMA1
Species	Human, Mouse, Rat, Chinese Hamster, Invertebrate, Mammal, Rabbit, Sheep
Reactivity Notes	Rabbit, Fruit Bat, Chinese Hamster, and <i>S. mansoni</i> reactivity reported in scientific literature (PMID: 18214989, 31877588, 29251349, and 28114363 respectively). Human, Mouse, Rat, and Sheep reported in multiple pieces of scientific literature.
Marker	Basement Membrane Marker
Specificity/Sensitivity	Laminin Antibody is pan-specific and reacts well with all Laminin isoforms tested: Laminin-1 (alpha-1, beta-1, and gamma-1) and Laminin-2 (alpha-2, beta-1, and gamma-1).
Immunogen	Laminin Antibody was made to Laminin 111 isolated from mouse Engelbreth-Holm-Swarm (EHS) sarcoma cells. [UniProt# P19137]
Notes	Alexa Fluor (R) products are provided under an intellectual property license from Life Technologies Corporation. The purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) in manufacturing; (ii) to provide a service, information, or data in return for payment; (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com . This conjugate is made on demand. Actual recovery may vary from the stated volume of this product. The volume will be greater than or equal to the unit size stated on the datasheet.
Product Application Details	



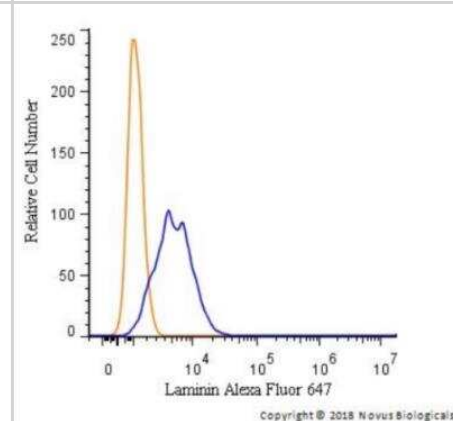
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot, Flow Cytometry, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen, Immunohistochemistry Free-Floating
Application Notes	This Laminin antibody can be used for Immunocytochemistry/Immunofluorescence, Functional assays, Immunohistochemistry paraffin and frozen sections, and Western blotting where it detects bands at 200 and 400 kDa. Immunostaining is enhanced by antigen retrieval with pepsin, especially paraffin tissue.

Images

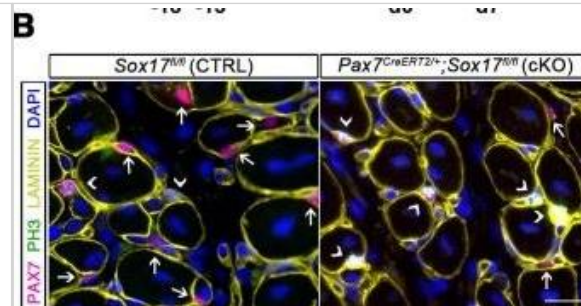
SOX17 regulates adult muscle regeneration after injury in Pax7CreERT2/+;Sox17fl/fl mutant mice. Representative images of cryosections from regenerating adult TA muscles d28 after injury, showing immunofluorescence for PAX7+ (quiescent, arrows) cells. Scale bar, 25 μ m. Image collected and cropped by Citeab from the following publication (SOXF factors regulate murine satellite cell self-renewal and function through inhibition of β 2-catenin activity. *Elife* (2018)) licensed under a CC-BY license.



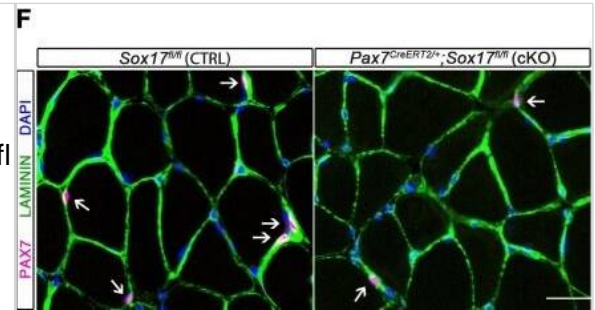
A surface stain was performed on HeLa cells with Laminin Antibody NB300-144AF647 (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 μ g/mL for 20 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.



Immunocytochemistry/ Immunofluorescence: Laminin Antibody [Alexa Fluor® 647] [NB300-144AF647] - SOX17 regulates adult muscle regeneration after injury in Pax7CreERT2/+;Sox17fl/fl mutant mice. (A) Schematic outline of experimental procedure for tamoxifen (TMX) injection (i.p., intraperitoneal). CTX, cardiotoxin injection; d, days. (B) Representative images of cryosections from regenerating adult TA muscles d7 after injury, showing immunofluorescence for PAX7+ (quiescent, arrows) & PH3+PAX7+ (proliferating, arrowheads) cells. Scale bar, 25 μ m. (C–D) Quantification of satellite cells as illustrated in (B). (E) Schematic outline of experimental procedure for TMX diet. CTX, cardiotoxin injection; d, days. (F) Representative images of cryosections from regenerating adult TA muscles d28 after injury, showing immunofluorescence for PAX7+ (quiescent, arrows) cells. Scale bar, 25 μ m. (G) Quantification of satellite cells as illustrated in (F). (H–I) Quantification of cross-sectional area in μ m² (H) & myofiber number per mm² (I). (J–K) Quantification of fat infiltration (Oil red O) (J) & fibrosis (Sirius red) (K) indicated as proportion of stained section (average of five sections per muscle). (L) Representative images of histological characterization of adult TA muscles 28 days after injury w/ Hematoxylin & eosin (cell infiltration; upper panel), Oil red O (fat infiltration; middle panel), & Sirius red (fibrosis; bottom panel) staining. Scale bars, 100 μ m. CTRL, Sox17fl/fl; cKO, Pax7CreERT2/+;Sox17fl/fl. n \geq 3 mice (each quantified at least in triplicate) for all experiments. Data expressed as mean \pm s.e.m., statistically analyzed w/ Student's unpaired t-test (C,D,G) & Mann-Whitney ranking test (H–K): n.s., not significant; *, p<0.05; **, p<0.01; ***, p<0.001, compared to CTRL. Image collected & cropped by CiteAb from following publication (<https://pubmed.ncbi.nlm.nih.gov/29882512>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

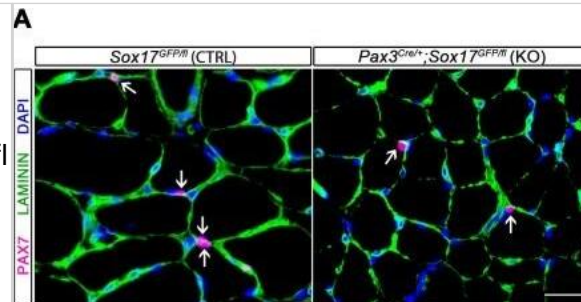


Immunocytochemistry/ Immunofluorescence: Laminin Antibody [Alexa Fluor® 647] [NB300-144AF647] - SOX17 is necessary to maintain satellite cell quiescence in adult muscles. (A,F) Representative Soleus cryosection images showing immunofluorescence for satellite cells (PAX7+, arrows) in Pax3Cre/+;Sox17GFP/fl & Pax7CreERT2/+;Sox17fl/fl mice, with appropriate controls. Scale bars, 25 μ m. Fibers are identified by LAMININ & nuclei are counterstained with DAPI. (B,G) Quantification of satellite cell number during postnatal growth (P14) & in adult. (C) Quantification of the ratio PAX7/MYOD+ satellite cells in P14 Soleus cryosections. (D) RT-qPCR analysis on adult TA muscles for Pax7 & SoxF genes in fresh FACS-isolated satellite cells from control & Sox17-knockout mice. (A–D) CTRL, Sox17GFP/fl; KO, Pax3Cre/+;Sox17GFP/fl. (E) Schematic outline of the experimental procedure for tamoxifen (TMX) injection (i.p., intraperitoneal) in Sox17fl/fl (CTRL) & Pax7CreERT2/+;Sox17fl/fl (cKO) mice. d, days. (E–G) CTRL, Sox17fl/fl; cKO, Pax7CreERT2/+;Sox17fl/fl. Quantification was performed in whole cross-sections. $n \geq 4$ mice (each quantified in triplicate) for all experiments. Data expressed as mean \pm s.e.m., statistically analyzed with Student's unpaired t-test: *, $p < 0.05$; **, $p < 0.01$, compared to CTRL. Satellite cells characterization of control & Sox17-knockout mice. (A) Immunofluorescence of satellite cells (MCAD; M-cadherin) in adult Soleus cryosections from control & Sox17 mutant mice. Scale bar, 25 μ m. (B) Quantification of satellite cell number illustrated in (A). CTRL, Sox17GFP/fl; KO, Pax3Cre/+;Sox17GFP/fl. $n \geq 4$ mice (each quantified in triplicate) for all experiments. Data expressed as mean \pm s.e.m., statistically analyzed with Student's unpaired t-test: *, $p < 0.05$, compared to CTRL. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29882512>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

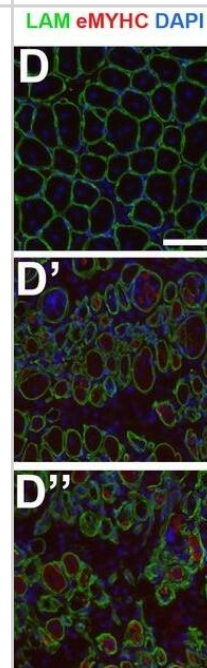


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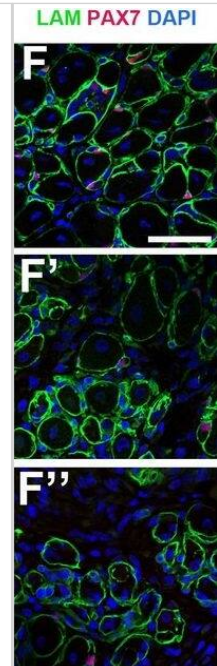
Immunofluorescence of satellite cells (MCAD; M-cadherin) in adult Soleus cryosections from control & Sox17 mutant mice. Scale bar, 25 μ m. (B) Quantification of satellite cell number illustrated in (A). CTRL, Sox17GFP/fl; KO, Pax3Cre+;Sox17GFP/fl. $n \geq 4$ mice (each quantified in triplicate) for all experiments. Data expressed as mean \pm s.e.m., statistically analyzed with Student's unpaired t-test: *, $p < 0.05$, compared to CTRL. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29882512>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: Laminin Antibody [Alexa Fluor® 647] [NB300-144AF647] - MuSC-specific Cdkn1c ablation hinders muscle regeneration. (A) Time-course of tamoxifen administration, intramuscular injury of TA muscle (CTX arrow), & muscle harvest (D7 arrow). (B–G) Cryosections of TA muscle were stained for histological & satellite cell population characterization 7 days after CTX injection. Analyzed animals at (B–G) were wild-type littermates (Wt; Pax7+; Cdkn1c+; B–G), Cre control (Pax7CreERT2; B'–G'), & Cdkn1c cKO (Pax7CreERT2; Cdkn1cFlox; B''–G''). (B) HE staining for histologic characterization of the muscles. (C) Oil Red O staining for evaluation of fat infiltration of the muscles. (D–E) embryonic myosin (eMYHC, red)/LAMININ (LAM, green) immunofluorescence to mark newly formed myofibers post-regeneration. (F–G) PAX7 (red)/LAMININ (LAM, green) immunofluorescence to mark PAX7+ satellite cells. Nuclei in (D–G) were counter-stained with DAPI (blue). Scale bars, 50 μ m. (H) Quantification of (F–G). Data show mean \pm SD, $n \geq 5$ animals. Asterisks indicate significance; ** $p \leq 0.01$. In vivo MuSC-specific Cdkn1c ablation. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30284969>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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Publications

Yiwei Lai, Ignacio Ramírez-Pardo, Joan Isern, Juan An, Eusebio Perdiguero, Antonio L Serrano, Jinxiu Li, Esther García-Domínguez, Jessica Segalés, Pengcheng Guo, Vera Lukesova, Eva Andrés, Jing Zuo, Yue Yuan, Chuanyu Liu, José Viña, Julio Doménech-Fernández, Mari Carmen Gómez-Cabrera, Yancheng Song, Longqi Liu, Xun Xu, Pura Muñoz-Cánoves, Miguel A Esteban Multimodal cell atlas of the ageing human skeletal muscle. *Nature* 2024-05-01 [PMID: 38649488]

Marion Onnée, Audrey Bénézit, Sultan Bastu, Aleksandra Nadaj-Pakleza, Béatrice Lannes, Flavie Ader, Corinne Thèze, Pascal Cintas, Claude Cancès, Robert-Yves Carlier, Corinne Metay, Mireille Cossée, Edoardo Malfatti, Paul Rösch The FLNC Ala1186Val Variant Linked to Cytoplasmic Body Myopathy and Cardiomyopathy Causes Protein Instability *Biomedicines* 2024-01-30 [PMID: 38397924]

Hong X, Isern J, Campanario S Et al. Mitochondrial dynamics maintain muscle stem cell regenerative competence throughout adult life by regulating metabolism and mitophagy *Cell Stem Cell* 2022-08-23 [PMID: 35998641] (ICC/IF, Mouse)

Details:

Citation using the Alexa Fluor 647 version of this antibody.

Hausmann A, Felmy B, Kunz L et al. Intercrypt sentinel macrophages tune antibacterial NF- κ B responses in gut epithelial cells via TNF *J Exp Med* 2021-11-01 [PMID: 34529751] (ICC/IF)

Details:

Citation using the Alexa Fluor 647 format of this antibody.

Kunz L, Schroeder T A 3D Tissue-wide Digital Imaging Pipeline for Quantitation of Secreted Molecules Shows Absence of CXCL12 Gradients in Bone Marrow *Cell Stem Cell* 2019-12-05 [PMID: 31809740] (ICC/IF, Mouse)

Miska J, Lee-Chang C, Rashidi A et al. Miska J, Lee-Chang C, Rashidi A et al. *Cell Rep* [PMID: 30943404] (ICC/IF, Mouse)

Mademtzoglou D, Asakura Y, Borok MJ et al. Cellular localization of the cell cycle inhibitor Cdkn1c controls growth arrest of adult skeletal muscle stem cells. *Elife* 2018-10-04 [PMID: 30284969] (IHC-Fr, Mouse)

Alonso-Martin S, Aurade F, Mademtzoglou D et al. SOXF factors regulate murine satellite cell self-renewal and function through inhibition of beta-catenin activity. *Elife* 2018-06-07 [PMID: 29882512] (ICC/IF, Mouse)



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Products Related to NB300-144AF647

NBP2-24891AF647	Rabbit IgG Isotype Control [Alexa Fluor® 647]
NB300-144AF700	Laminin Antibody [Alexa Fluor® 700]
NBP2-42384PEP	Laminin Recombinant Protein Antigen
236-EG-200	EGF [Unconjugated]

Limitations

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