

**MOUSE ANTI-LAMININ-5
 ALEXA FLUOR® 488 CONJUGATED
 MONOCLONAL ANTIBODY**

CATALOG NUMBER:	MAB19562X	QUANTITY:	100 µg
LOT NUMBER:		CONCENTRATION:	1 mg/mL
CLONE NAME:	D4B5	HOST/ISOTYPE:	Ms IgG ₁
ALTERNATE NAMES:	Laminin gamma2 chain	EPITOPE:	amino acids 382-608

BACKGROUND: Laminins are basement membrane, extracellular matrix glycoproteins that are composed of alpha, beta and gamma heterotrimeric chains. Different combinations of five alpha chains, three beta chains, and two gamma chains form at least 12 laminin isoforms. Laminin-5 (LN5), which consists of laminin alpha3, beta3 and gamma2 chains, is a highly conserved component of anchoring filaments underlying the hemidesmosome structure of epidermal keratinocytes. Mutations or deletion in the LN5 genes (LAMA3, LAMB3, and LAMC2) is associated with epidermolysis bullosa, a lethal skin blistering disease. LN5 may stabilize the epidermal/dermal junction of skin through binding with integrins alpha3/beta1, alpha6/beta4 and type VII collagen and has a critical role in the anchorage and locomotion of a wide variety of cell types, including epithelial cells, fibroblasts, neurons and leukocytes. Compared to fibronectin, collagen, or vitronectin, cells of epithelial origin will adhere to Laminin-5 faster and will spread to a larger extent. Recently, Laminin-5 is attracting attention as a substrate for carcinoma cells that may stimulate migration, since it has been detected at the leading edge of invasive cancer tissue in several types of human carcinomas (Niki, et al., 2002, Lohi, et al., 2001).

SPECIFICITY: Monoclonal antibody MAB19562 was developed against amino acid residues 382-608 of human laminin gamma2 chain (III domain) expressed as a GST fusion protein. The antibody recognizes the 150 kDa (precursor form) and 105 kDa (mature form) chain proteins of Laminin-5. No reactivity is expected with other laminin types, as the gamma2 chain of laminin is unique to laminin-5.

APPLICATIONS: Immunocytochemistry: 2 µg/mL
Flow cytometry
Optimal working dilutions must be determined by the end user.

SPECIES REACTIVITY: Human. Reactivity with other species is not confirmed.

IMMUNOGEN: Amino acid residues 382-608 of human laminin gamma2 chain (III domain) expressed as a GST fusion protein.

PRESENTATION: Purified immunoglobulin conjugated to Alexa Fluor® 488. Liquid in PBS containing 1% BSA, 0.05% Tween®-20 and 0.05% sodium azide.

STORAGE/HANDLING: Maintain at 2°-8°C for up to 12 months from date of receipt.



REFERENCES:

- Neureiter, D. et al. (2005). Different capabilities of morphological pattern formation and its association with the expression of differentiation markers in a xenograft model of human pancreatic cancer cell lines. *Pancreatology* **5(4-5)**: 387-397.
- Tasanen, K. et al. (2004). *Am. J. Pathology* **164 (6)**: 2027-2038.
- Tasanen, K. et al. (2004). Keratinocytes from patients lacking collagen XVII display a migratory phenotype. *Am. J. Pathol.* **164(6)**: 2027-2038.
- Natarajan, E et al. (2003). Co-Expression of p16INK4A and Laminin 5 gamma2 by Microinvasive and Superficial Squamous Cell Carcinomas in Vivo and by Migrating Wound and Senescent Keratinocytes in Culture. *Am J Pathol* **163(2)**: 477-491.
- Joly, D et al. (2003). β 4 Integrin and Laminin 5 Are Aberrantly Expressed in Polycystic Kidney Disease . *Am J Pathol* **163**: 1791-1800.
- Siler U et al. (2002). Laminin gamma2 chain as a stromal cell marker of the human bone marrow microenvironment. *British J Haematol* **119**: 212-220.
- Yamamoto, H et al. (2001). Expression of the gamma2 Chain of Laminin-5 at the Invasive Front Is Associated with Recurrence and Poor Prognosis in Human Esophageal Squamous Cell Carcinoma. *Clin Can Res* **7**: 896-900.
- Decline, F. and Rousselle, P. (2001). Keratinocyte migration requires alpha2beta1 integrin-mediated interaction with the laminin 5 gamma2 chain. *J. Cell Sci.* **114(Pt 4)**: 811-823.
- Kagesato, Y. et al. (2001). Sole expression of laminin gamma 2 chain in invading tumor cells and its association with stromal fibrosis in lung adenocarcinomas. *Jpn. J. Cancer Res.* **92(2)**: 184-192.
- Seftor, RE et al (2001). Cooperative Interactions of Laminin 5 gamma2 chain, Matrix metalloproteinase-2, and membrane trypsin 1 matrix metalloproteinase are required for mimicry of embryonic vasculogenesis by aggressive melanoma. *Canc Res* **61**: 6322-6327.
- Koshikawa, N. et al. (1999). Overexpression of laminin gamma2 chain monomer in invading gastric carcinoma cells. *Cancer Res.* **59(21)**: 5596-5601.
- Mizushima, H. et al. (1998). Wide distribution of laminin-5 gamma 2 chain in basement membranes of various human tissues. *Hormone Research* **50(suppl2)**: 7-14.

Important Note: During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.

Unless otherwise stated in our catalog or other company documentation accompanying the product(s), our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans or animals.

©2002 - 2009: Millipore Corporation. All rights reserved. No part of these works may be reproduced in any form without permission in writing.

USA & Canada • Phone: +1(800) 437-7500 • Fax: +1 (951) 676-9209
www.millipore.com