

Supplementary Information

Myo1g is required for efficient adhesion and migration of activated B lymphocytes to inguinal lymph nodes

Cruz-Zárate D^{1,3*}, López-Ortega O^{1*}, Girón-Pérez D^{1*}, Gonzalez-Suarez AM²,
García-Cordero JL², Schnoor M¹, *Santos-Argumedo L¹

These authors equally contributed to this manuscript

¹Departamento de Biomedicina Molecular, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN), México City

²Unidad Monterrey, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN), Monterrey NL, México

³Departamento & Posgrado en Inmunología, Escuela Nacional de Ciencias Biológicas del Instituto Politécnico Nacional (ENCB-IPN), México City, México

Corresponding author information

Leopoldo Santos-Argumedo

Av. Instituto Politécnico Nacional 2508,

San Pedro Zacatenco,

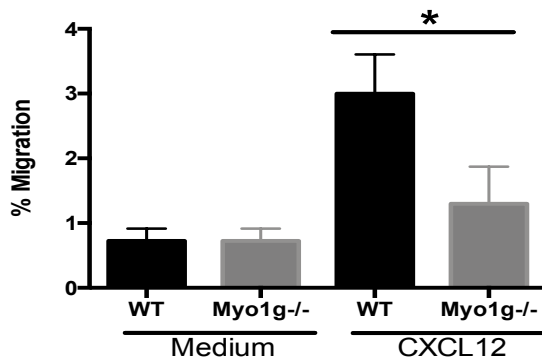
07360 Ciudad de México

Telephone number: +52 (55) 5747-3800 ext: 5020

Fax number: +52 (55) 5747-3800 ext: 5020

E-mail Address: lesantos@cinvestav.mx

Supplementary Figure S1



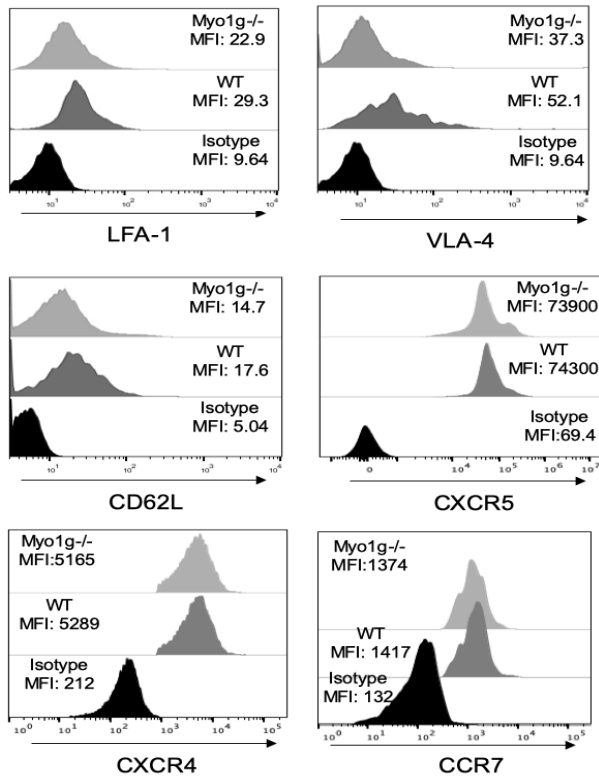
Trans-well migration of LPS + IL-4 activated WT and Myo1g^{-/-} B lymphocytes.

1.5x10⁴ LPS + IL-4 activated WT, and Myo1g^{-/-} B lymphocytes were placed in the 5 μ m pore-trans-well chamber's upper compartment. FCS or CXCL12 (100ng/ml) was added to the lower chamber. Data show the percentage of migration of activated B lymphocytes after 4h at 37°C. ****P<0.0001.

Supplementary Video S2. Representative video of LPS + IL-4 activated WT B lymphocytes moving through the venules of an inguinal lymph node previously (1 h) inoculated with CXCL13 (25ng/ml. (40x objective)

Supplementary Video S3. Representative video of LPS + IL-4 activated Myo1g^{-/-} B lymphocytes moving through the venules of an inguinal lymph node previously (1 h) inoculated with CXCL13 (25ng/ml. (40x objective).

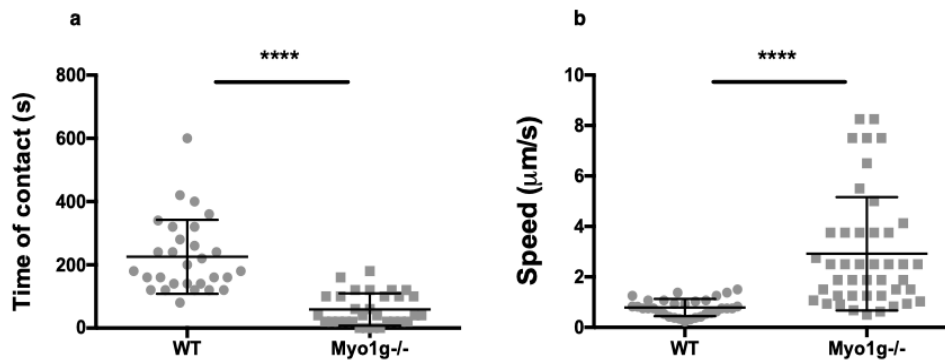
Supplementary Figure S4



Surface expression of adhesion molecules, integrins, and chemokine receptors in LPS + IL-4 activated WT and Myo1g^{-/-} B lymphocytes.

Representative histograms and mean fluorescence intensity values of surface expression of adhesion molecules, integrins and chemokine receptors and isotype control antibodies in LPS + IL-4 activated WT and Myo1g^{-/-} B lymphocytes.

Supplementary Figure S5



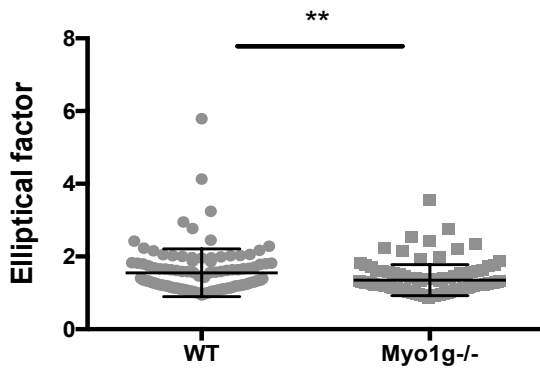
Motility of LPS + IL-4 activated WT and Myo1g^{-/-} B lymphocytes in a confined 3D microchannel with CXCL12 as a chemoattractant. (a) Time of contact (s) of LPS + IL-4 activated WT or Myo1g^{-/-} B lymphocytes within 10 µm microchannel wall stimulated by a gradient of CXCL12. (b) speed (µm/s) of B lymphocytes moving through a 10 µm microchannel. Data are presented as mean ± s.d.

*P<0.01.

Supplementary Video S6. Representative video of LPS + IL-4 activated WT B lymphocytes moving through 10µm microchannel under CXCL13 gradient. (10x objective).

Supplementary Video S7. Representative video of LPS + IL-4 activated Myo1g^{-/-} B lymphocytes moving through 10µm microchannel under CXCL13 gradient. (10x objective).

Supplementary Figure S8



Elliptical factor in LPS + IL-4 activated B lymphocytes. Measurement of the elliptical factor of LPS + IL-4 activated WT or Myo1g^{-/-} B lymphocytes on fibronectin-coated slides. Data correspond to three independent experiments. Data are presented as mean \pm s.d. **** $P < 0.0001$.