CD41a Monoclonal Antibody (eBioMWReg30 (MWReg30)), PE, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse, Human
Host/Isotype	Rat / IgG1, kappa
Recommended Isotype Control	Rat IgG1 kappa Isotype Control (eBRG1), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	eBioMWReg30 (MWReg30)
Conjugate	PE
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_763485

Applications	Tested Dilution	Publications
Immunocytochemistry (ICC/IF)	-	2 Publications
Flow Cytometry (Flow)	0.125 µg/test	44 Publications

Product Specific Information

Description: The eBioMWReg30 monoclonal antibody reacts with mouse CD41 (fibrinogen receptor, gpIIb, integrin alpha IIb). While initially thought to be expressed exclusively on the surface of platelets and megakaryocytes, it has been demonstrated that CD41 is also expressed on hematopoietic progenitors in the embryo, fetus and adult. CD41 associates with CD61 (gpIIIa, integrin beta III) to form a receptor which plays a major role in platelet function, including binding of several adhesion molecules such as fibrinogen, fibronectin and vitronectin.

Recently, the SLAM-family markers, CD48 and CD150 have been used to reliably identify hematopoietic stem cells (HSC). Specifically, it was found that CD150+CD48- bone marrow cells were highly efficient in their ability to confer long-term multi-lineage reconstitution in irradiated mice. Furthermore, the efficiency of reconstitution was enhanced when HSCs were further enriched through the exclusion of CD41+ cells. Thus, the use of CD150+CD48-CD41- as an expression profile efficiently identifies hematopoietic stem cells.

Applications Reported: This eBioMWReg30 (MWReg30) antibody has been reported for use in flow cytometric analysis.

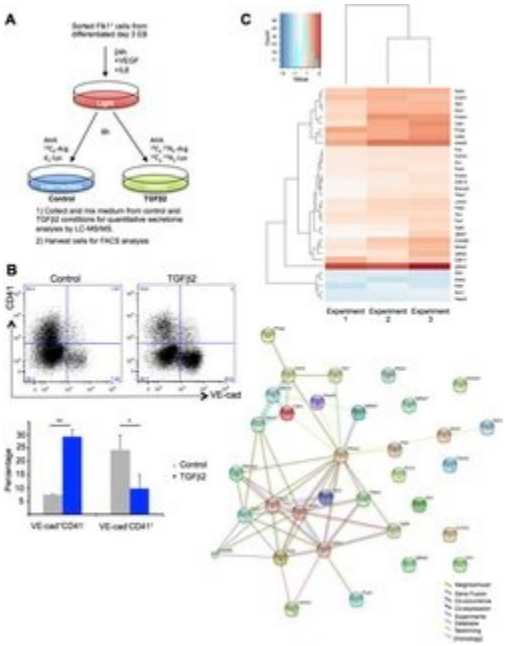
Applications Tested: This eBioMWReg30 (MWReg30) antibody has been tested by flow cytometric analysis of mouse platelets. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell

sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

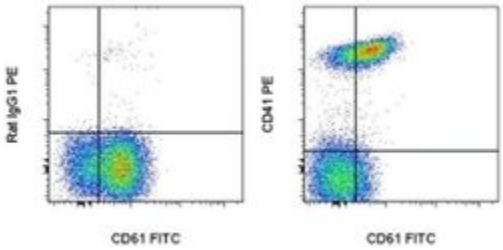
Filtration: 0.2 µm post-manufacturing filtered.

Advanced Verification Data



CD41a Antibody (12-0411-82)
Figure 2 TGFbeta treatment during BL-CFC culture favours the vascular lineage over the haematopoietic one. (A) Experimental workflow of the quantitative secretome analysis by LC-MS/MS. (B) Flow cytometry analysis of VE-Cad and CD41 expression after 6 hours of culture following the addition of TGFbeta2 compared to control condition. Upper panel shows one representative example of flow cytometry analysis while the bottom one shows a bar graph representing the average frequency of the EC (VE-Cad + CD41 -) and HPC (VE-Cad - CD41 +) populations from 3 independent experiments. The p-values were calculated with Student's t-test (2 tails, type 3). EC population: **Control versus TGFbeta2 p-value = 0.004 (n = 3); HPC population: *Control versus TGFbeta2 p-value = 0.03 (n = 3). (C) Heatmap representing Log 2 fold change (Log 2 FC) of protein expression between TGFbeta2 treated and non-treated samples for all the proteins detected in the 3 biological replicates. Each column represents one independent secretome experiment. (D) STRING representation of a network involving the proteins detected in C. Nine proteins out of 33 were not part of the network. Different line colours represent the types of evidence for the association between proteins. Cell treatment validation info.

Product Images For CD41a Monoclonal Antibody (eBioMWReg30 (MWReg30)), PE, eBioscience™



CD41a Antibody (12-0411-82) in Flow
Staining of mouse platelets with Anti-Mouse/Rat CD61 (Integrin beta 3) FITC (Product # 11-0611-82) and 0.06 µg of Rat IgG1 K Isotype Contol PE (Product # 12-4301-82) (left) or 0.06 µg of Anti-Mouse CD41 PE (right). Total events were used for analysis.

View more figures on thermofisher.com

46 References

Immunocytochemistry (2)

British journal of pharmacology

Platelet secretion of CXCL4 is Rac1-dependent and regulates neutrophil infiltration and tissue damage in septic lung damage.

"12-0411 was used in Immunofluorescence to investigate whether platelet-derived CXCL4 might support pulmonary neutrophilia in abdominal sepsis, showing that secretion of CXCL4 is Rac1-dependent and regulates neutrophil infiltration and tissue damage."

Authors: Hwaiz R,Rahman M,Zhang E,Thorlacius H

Species
Mouse

Dilution
Not Cited

Year
2015

Journal of leukocyte biology

Rac1-dependent secretion of platelet-derived CCL5 regulates neutrophil recruitment via activation of alveolar macrophages in septic lung injury.

"12-0411 was used in Immunofluorescence to assess the role of platelet-derived CCL5 in facilitating sepsis-induced neutrophil accumulation in the lung."

Authors: Hwaiz R,Rahman M,Syk I,Zhang E,Thorlacius H

Species
Mouse

Dilution
Not Cited

Year
2015

Flow Cytometry (44)

The Journal of biological chemistry

SNAP23 is essential for platelet and mast cell development and required in connective tissue mast cells for anaphylaxis.

"Published figure using CD41a monoclonal antibody (Product # 12-0411-82) in Flow Cytometry"

Authors: Cardenas RA,Gonzalez R,Sanchez E,Ramos MA,Cardenas EI,Rodarte AI,Alcazar-Felix RJ,Isaza A,Burns AR, Heidelberger R,Adachi R

Species
Not Applicable

Dilution
Not Cited

Year
2021

Arteriosclerosis, thrombosis, and vascular biology

Platelet Dysfunction and Thrombosis in JAK2^{V617F}-Mutated Primary Myelofibrotic Mice.

"12-0411 was used in Flow cytometry/Cell sorting to examine the propensity for thrombosis, as well as platelet activation properties in a mouse model of primary myelofibrosis induced by JAK2V617F mutation."

Authors: Matsuura S,Thompson CR,Belghasem ME,Bekendam RH,Piasecki A,Leiva O,Ray A,Italiano J,Yang M,Merill-Skoloff G,Chitalia VC,Flaumenhaft R,Ravid K

Species
Mouse

Dilution
Not Cited

Year
2020

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More applications with references on thermofisher.com