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Datasheet for 210-4139

Mouse Red Blood Cell RBC Antibody

Overview

Description:	Anti-Mouse Red Blood Cell (RBC) (RABBIT) Antibody - 210-4139
Item No.:	210-4139
Size:	50 mg
Applications:	Agglutination, Cellular Assay, WB
Host Species:	Rabbit

Product Details

Background:	Anti-Mouse Red Blood Cells Antibody recognizes mouse red blood cells and can be used in a variety of agglutination assays where agglutination or clumping of red blood cells is a positive indication of the presence of an analyte, virus particle or bacteria. Red blood cells (RBCs), also known as erythrocytes, are metabolically active cells that are highly adapted to serve their function in blood gas exchange (oxygen/CO2 transport). The red blood cells enable the transport of sufficient O2 between respiratory surfaces (lungs, gills) and metabolizing tissues by means of their high intracellular concentration of hemoglobin.
Synonyms:	rabbit Anti-mouse RBC antibody, Red blood cell antibody, Antibody for hemagglutination, rabbit anti-mouse red blood cell, rabbit antibody to mouse red blood cells (RBC), haemolysin, hemolysin, erythrocytes sensitizing agent, anti-erythrotyes, anti-erythrocytes antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Immunogen:	Mouse washed pooled Red Blood Cells (RBC)
Purity/Specificity:	This product is an IgG fraction antibody purified from polyspecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above.
Relevant Links:	• 210-4139 SDS

Application Details

Tested Applications:	Agglutination
Suggested Applications:	Cellular Assay, WB (Based on references)
Application Note:	Anti-Mouse Red Blood Cells Antibody has been tested by agglutination and is suitable for sensitizing cells in hemolytic complement assays, and for lymphocyte screening procedures.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Tissue Data

Tissue Type:	Red Blood Cells

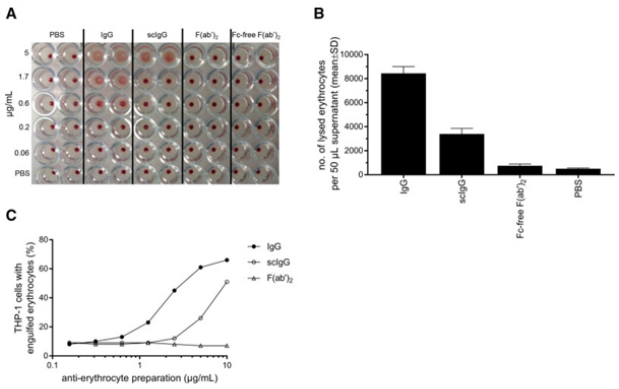
Formulation

Physical State:	Lyophilized
Concentration:	10.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Sterility:	Non-sterile
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	5.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

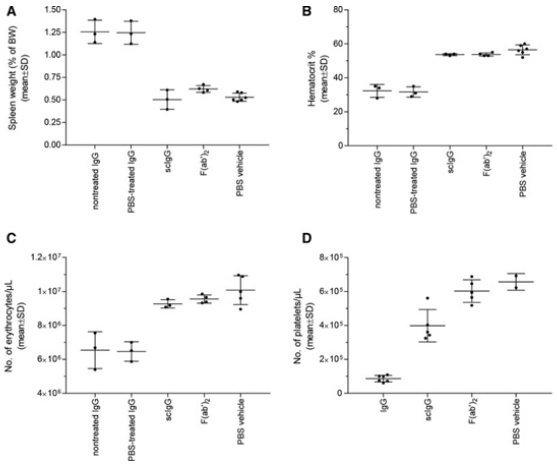
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



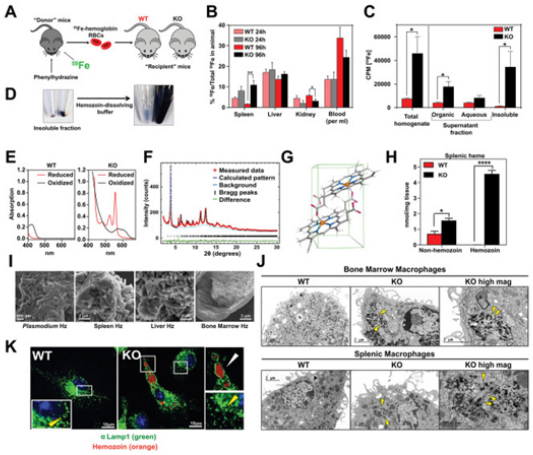
Figure

Complement-independent effector functions of imlifidase-generated anti-erythrocyte fractions. In (A), FcγR-dependent retention of erythrocytes to a confluent layer of THP-1 cells after opsonization with anti-erythrocyte IgG, scIgG, or F (ab')2 in the absence of complement (n = 2). In (B), ADCC activity of THP-1 cells after opsonization of erythrocytes with the different anti-erythrocyte IgG fractions (n = 2–3). In (C), ADCP activity of THP-1 cells after opsonization with the different anti-erythrocyte IgG fractions. For more information on the IgG fractions used, see Figure S4, SDC, http://links.lww.com/TP/C327. ADCC, antibody-dependent cellular cytotoxicity; ADCP, antibody-dependent cellular phagocytosis; IgG, immunoglobulin G; MFI, mean fluorescence intensity; scIgG, single-cleaved IgG. Fig 6.
PMID: 34966107



Figure

FcγR-dependent eAIHA (A–C) and eITP (D) in mice induced with the anti-erythrocyte/antiplatelet preparations shown in Figure S5, SDC, http://links.lww.com/TP/C327. In eAIHA, spleen weights (A), hematocrit (B) and erythrocyte number (C) were assessed at termination (day 3). In eITP, platelets were counted 1 d after disease induction (D). eAIHA, experimental autoimmune hemolytic anemia; eITP, experimental immune thrombocytopenic purpura; IgG, immunoglobulin G; scIgG, single-cleaved IgG. Fig 7.
PMID: 34966107



Figure

(A) Experimental design of 59Fe labeling and in vivo recycling. Fe-labeled RBCs were opsonized with the mouse red blood cell antibody (p/n 210–4139) and injected into WT and KO recipient mice. (B) Quantification of 59Fe retained in tissues, represented as the ratio of the amount of radioactivity within an organ to that of the entire animal. (C) 59Fe retained in differentially extracted fractions of the spleen at 96 hr, represented as counts per min. Total homogenate: homogenized and proteinase-treated whole spleen; Organic: ethyl acetate extractable [59Fe]heme; Aqueous: ethyl acetate non-extractable 59Fe; Insoluble fraction: proteinase-insoluble fraction containing 59Fe (n = 4–6 across all groups and timepoints). (D) Image of insoluble fractions before and after dissolving in buffer containing 100 mM NaOH, 2% SDS and 3 mM EDTA. (E) Visible spectra of dissolved insoluble fractions. (F) Powder x-ray diffraction of purified insoluble fraction from KO spleens (red: measured data; dark blue: calculated pattern; light blue: background; green: structural plot) (G) Chemical structure of hemozoin from KO mice. (H) Quantification of splenic heme by spectrophotometric measurements (n = 3). (I) Scanning electron microscopy of hemozoin isolated from Plasmodium falciparum, KO spleen, liver, and bone marrow. (J) Transmission electron microscopy of F4/80+ bone marrow and splenic macrophages from WT and KO mice. At least 3 cells were imaged per genotype. (K) Confocal microscopy of bone marrow macrophages from WT and KO mice probed with anti-LAMP1 antibody and secondary alexa-488 antibody. Hemozoin is pseudocolored as orange. White arrow points to hemozoin-laden vesicle, yellow arrow points to non hemozoin-laden vesicle. At least 20 cells were analyzed per genotype. *p<0.05; **p<0.01.
Figure 5. PMID: 31571584

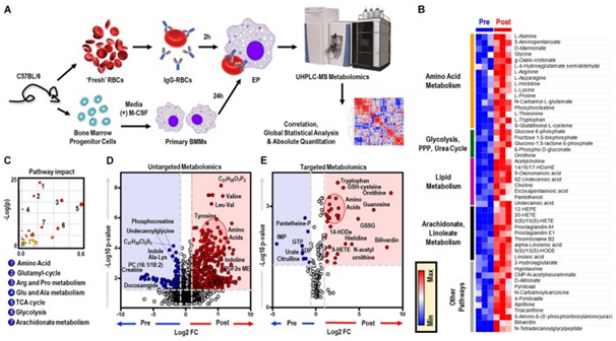


Figure
In vitro assessment of BMDM EP. Mouse RBCs were incubated with rabbit, anti-mouse RBC IgG (p/n 210-4139). BMDMs were then incubated with PBS (control) or with IgG-coated RBCs for in vitro opsonization to reflect EP. (A) Metabolic correlates identified before (Pre) and after (Post) EP were plotted as a hierarchically-clustered heat map (B). The metabolome view map of relevant metabolic pathways showed significant changes in cellular metabolic pathways following EP (C). Univariate analysis of the BMDM metabolome using untargeted (D) and targeted (E) metabolomics methods to identify metabolites that change due to EP. The region highlighted in red (fold change (FC) ≥ 2.0; p-value < 0.05) indicates metabolites that are present in significantly higher amounts in BMDMs following EP (Post); whereas, the region highlighted in blue (fold change ≤ 0.5; p-value < 0.05) indicates metabolites that accumulate in BMDMs before EP (Pre). Amino acids identified clustered in similar regions of Pre were encircled (red). Fig 1. PMID: 32425810

References

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