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Datasheet for R406-0050

Sheep Red Blood Cells 100% Washed Pooled Cells

Overview

Description:	Sheep Red Blood Cell (RBC) 100% Washed Pooled Cells - R406-0050
Item No.:	R406-0050
Size:	50 mL
Applications:	Functional Assay, IF, Other
Origin:	Sheep

Product Details

Background:	Sheep red blood cells are useful for the titration of complement, adsorption procedures, testing for agglutinins/HA assays, and for the preparation of stroma as particulate reagents.
Synonyms:	Sheep Washed Pooled Cells, Sheep WPCs, Sheep Red Blood Cells, Sheep RBCs, sheep erythrocytes
Species of Origin:	Sheep

Target Details

Purity/Specificity:	Sheep whole blood is washed to remove the platelet rich plasma, buffy coat layer, and leukocytes (WBC). After processing, the finished product is supplied as 100% red blood cells. Sheep red blood cells are perishable and are collected and processed upon receipt of your order.

Application Details

Suggested Applications:	Functional Assay, IF, Other (Based on references)
Application Note:	Complement titration, adsorption procedures, HA assays and for the preparation of stroma as particulate reagents.
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
Sex:	Mixed
Strain:	Sheep - Mixed

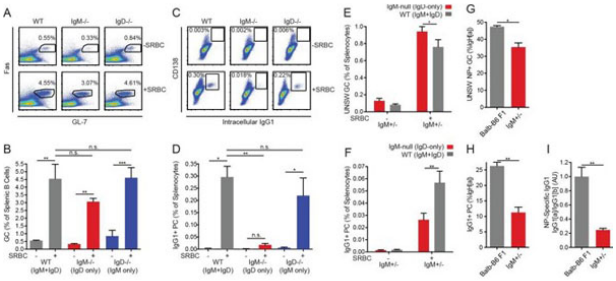
Formulation

Physical State:	Liquid
Buffer:	None
Sterility:	Non-sterile
Preservative:	None
Stabilizer:	None

Shipping & Handling

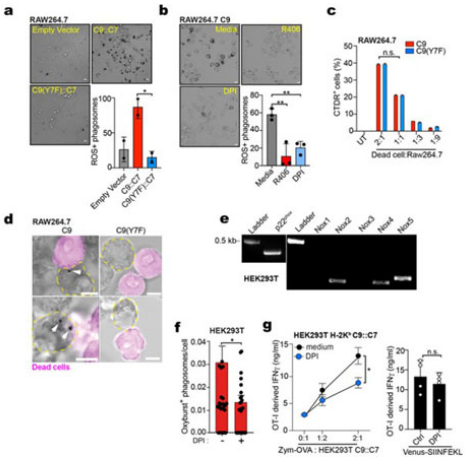
Shipping Condition:	Wet Ice
Storage Condition:	Store sheep washed pooled red blood cells at 4° C prior to opening. Be advised that blood is a perishable product and exact shelf may depend on application.
Expiration:	This product MAY be stable for up to one (1) week if properly stored and handled.

Images



Figure

IgD-only cells have intact germinal center responses but impaired IgG1+ SLPC responses.(A) Splenic (CD19+) B cells from WT, IgM−/−, and IgD−/− mice unimmunized or 5 days after i.p. immunization with 200 µL of 10% SRBCs. (B) Quantification of germinal center (Fashi GL-7hi) cells in (A). (C) Splenocytes from mice in (A). (D) Quantification of CD138+ IgG1+ plasma cells in (C). (E) WT (IgMb+) and IgM-null (IgDa+) germinal center B cells as a percentage of live splenocytes in unimmunized and IgM+/− mice 5 days after i.p. immunization with 200 µL of 10% SRBCs. (F) WT (IgG1b+) and IgM-null (IgG1a+) switched plasma cells (CD138 +IgG1+) as a percentage of live splenocytes in IgM+/− mice unimmunized or 5 days after i.p. immunization with 200 µL of 10% SRBCs. (G) Fraction of unswitched NP-specific germinal center cells (CD19+ Fashi GL-7hi IgM/IgD+) from the IgHa locus in the spleens of Balb/c-B6 F1 and IgM +/− mice 7–8 days after i.p. immunization with 100 µg NP-RSA. (H) Fraction of IgG1+CD138+ plasma cells from the IgHa locus in Balb/c-B6 F1 and IgM+/− mice 7–8 days after i.p. immunization with 100 µg NP-RSA. (I) NP-specific IgG1a and IgG1b titers at OD = 0.2 were calculated for the mice in (G–H) by ELISA. The IgG1a to IgG1b titer ratio was calculated for each mouse, and all ratios were normalized such that the average IgG1a/IgG1b ratio in Balb/c-B6 F1 samples = 1.0. For (A-D), statistics from n = 4 unimmunized mice of each genotype and n = 3 WT, n = 6 IgM−/−, and n = 7 IgD−/− immunized mice were pooled. For (E-F), n = 5 unimmunized and n = 5 immunized mice are shown. For (G-I), n = 5 Balb/c-B6 F1 mice and n = 3 IgM+/− mice are shown. One-way ANOVA with Tukey's multiple comparisons test (B and D), a paired t test (E-F), and Welch's t test (G-I) were used to calculate p values, and mean +SEM is displayed. *p<0.05, **p<0.01, ***p<0.001. Figure 7. PMID: 29521626.



Figure

DNGR signalling promotes phagosomal ROS production. a-b, Confocal images of RAW264.7 cells transfected with empty vector or plasmid encoding C9::C7 or C9(Y7F)::C7 receptors and pulsed with zymosan (a) or dead sRBCs (b) in the presence of Nitroblue tetrazolium (NBT) (Scale bar 10 µm). Quantification of ROS+ phagosomes. Data represented as mean (± s.e.m.) (a) or (± s.d.) (b) and are representative of two independent determinations (n = 2). P values determined by one-way ANOVA. c, RAW264.7 stably expressing C9 or C9(Y7F) receptors were pulsed with CellTracker DeepRed (CTDR)-labelled FP-sRBCs for 2 hrs. Percentage of CTDR+ RAW264.7 cells was quantified by flow cytometry. Data represented as mean (± s.d.) and are representative of two independent experiments (n = 2). d, Confocal images of RAW264.7 stably expressing C9 or C9(Y7F) receptors pulsed with dead cells in the presence of NBT for 2 hrs (scale bars 10 µm). Image is a representative image of three similar images. e, RT-PCR of NADPH oxidase subunits in HEK293T. Representative of two experiments (n = 2). f, HEK293T cells stably expressing C9::C7 were challenged with zymosan-Oxyburst in the presence or absence of DPI for 1 hr. Oxyburst+ positive phagosomes were quantified across 5 fields of view (n > 100 phagosomes). Data represented as mean (± s.e.m.). P values were calculated by unpaired parametric test, Mann-Whitney and are representative of two independent experiments (n = 2). g, HEK293T C9::C7 cells were pulsed with zymosan-Ova (left) or transfected with plasmid encoding VENUS-SIINFEKL (right) in the presence or absence of DPI (10 µM) for 4 hrs before fixing and adding of OT-I Rag1 -/- T-cells. IFN-γ was assessed by ELISA, plotted as mean (± s.d.) of an experimental triplicate. n.s., not significant; *P ≤ 0.05; **P ≤ 0.01. Extended Data Fig 6. PMID: 33349708.

References

- Schultz JR et al. Identification of 5-(Aryl/Heteroaryl)amino-4-quinolones as Potent Membrane-Disrupting Agents to Combat Antibiotic-Resistant Gram-Positive Bacteria. *J Med Chem.* (2022)
- Canton, J et al. The receptor DNGR-1 signals for phagosomal rupture to promote cross-presentation of dead-cell-associated antigens. *Nature Immunology* (2021)
- Noviski, M et al. IgM and IgD B cell receptors differentially respond to endogenous antigens and control B cell fate. *ELife* (2018)
- Eisenstein TK et al. Anandamide and Δ9-tetrahydrocannabinol directly inhibit cells of the immune system via CB2 receptors. *J Neuroimmunol.* (2007)

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