Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

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

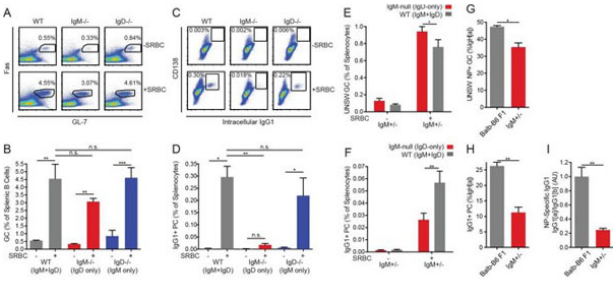
Formulation

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

Shipping & Handling

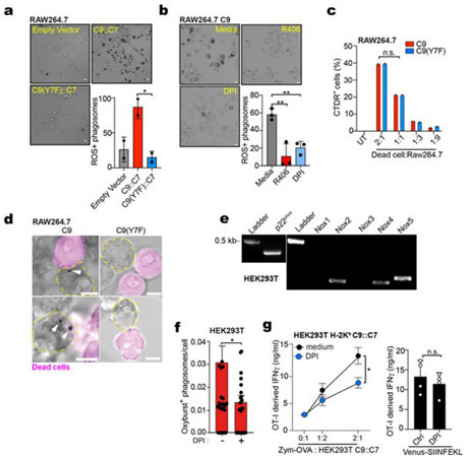
Shipping Condition:	Wet Ice
Storage Condition:	Store sheep washed pooled red blood cells at 4° C prior to opening. Be advised that blood is a perishable product and exact shelf may depend on application.
Expiration:	This product MAY be stable for up to one (1) week if properly stored and handled.

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)
- Erickson JJ et al. Pregnancy enables antibody protection against intracellular infection. *Nature.* (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)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.