

Datasheet for 213-4139

Sheep Red Blood Cell RBC Antibody

Overview

Description:	Anti-Sheep Red Blood Cell (RBC) (RABBIT) Antibody - 213-4139
Item No.:	213-4139
Size:	50 mg
Applications:	Agglutination, Cellular Assay, Other
Host Species:	Rabbit

Product Details

Background:	Anti-SHEEP Red Blood Cell Antibody may be used in hemagglutination assays. Anti-SHEEP RBC Antibody is used to sensitize erythrocytes and quantitate agglutination. Hemagglutination assay or HA is a method of quantification for viruses or bacteria by hemagglutination. Some viral families and many bacteria have envelope or surface proteins which are able to agglutinate (stick to) human or animal red blood cells (RBC) and bind to N-acetylneuraminic acid. As each of the agglutinating molecule attaches to multiple RBCs, a lattice-structure will form. Normally, a virus dilution (e.g. 2-fold from 1:4 to 1:4096) will be applied to an RBC dilution (e.g. 0.1% to 0.7% in steps of 0.2%) for approx. 30 min, often at 4° C, otherwise viruses with neuraminidase activity will detach the virus from the RBCs. Then the lattice forming parts will be counted and the titer calculated. The titer of a hemagglutination assay is determined by the last viable "lattice" structure found. This is because it is at the point where, if diluted anymore, the amount of Virus particles will be less than that of the RBCs and thus not be able to agglutinate them together.
Synonyms:	rabbit Anti-sheep RBC antibody, Sheep Red Blood Cell Antibody, Rabbit anti-sheep Antibody for hemagglutination, rabbit anti-sheep red blood cell, rabbit antibody to sheep Red Blood Cells (RBC), haemolysin, hemolysin, erythrocytes sensitizing agent, anti-erythrocyte, anti-sheep erythrocyte antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Immunogen Type:	Other
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Immunogen:	Sheep washed pooled Red Blood Cells (RBC)
Purity/Specificity:	Rabbit Anti-Sheep Red Blood Cell 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:	• 213-4139 SDS

Application Details

Tested Applications:	Agglutination
Suggested Applications:	Cellular Assay, Other (Based on references)
Application Note:	Rabbit Anti-Sheep RBC Antibody is tested for agglutination of cells on titer plates. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.
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
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Formulation

Physical State:	Lyophilized
Concentration:	11.2 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)

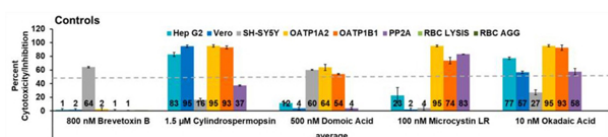
Shipping & Handling

Shipping Condition:	Ambient
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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



Agglutination

Effects of controls in cell line panel, red blood cells, and the enzyme protein phosphatase 2A.

OATP1 A2 and OATP1 B1 Transporto™ cells and Vero, Hep G2, and SH-SY5Y cells were treated with 800 nM brevetoxin B, 1.5 µM cylindrospermopsin, 500 nM domoic acid, 100 nM microcystin LR, and 10 nM okadaic acid for 72 h. The results were normalized to solvent controls and expressed as a percentage. Those that induce more than 50% cytotoxicity (dotted line) are considered active. In addition, sheep red blood cells were treated with the same compounds for 4 h to measure hemagglutination or 6 h to measure cell lysis. None of the controls exhibited red blood cell lysis or hemagglutination at the concentrations tested. The effect of these compounds on protein phosphatase after 30 min of treatment is also shown. Unique patterns of cytotoxicity were seen with each of the known phycotoxins tested. The average of three independent experiments ± standard deviation is shown.

Fig 1. PMID: 37999526. Additional images in article Fig2-7.

References

- Guzmán EA et al. An Assessment of Potential Threats to Human Health from Algae Blooms in the Indian River Lagoon (USA) 2018-2021: Unique Patterns of Cytotoxicity Associated with Toxins. *Toxins (Basel)*. (2023)
- de Silva S. et al. CD40 Enhances Type I Interferon Responses Downstream of CD47 Blockade, Bridging Innate and Adaptive Immunity. *CANCER IMMUNOLOGY RESEARCH* (2020)
- Wang Y et al. Mitochondrial Fission Promotes the Continued Clearance of Apoptotic Cells by Macrophages. *Cell*. (2017)
- Inzana TJ et al. Decoration of Histophilus somni lipooligosaccharide with N-acetyl-5-neuraminic acid enhances bacterial binding of complement factor H and resistance to killing by serum and polymorphonuclear leukocytes. *Vet Microbiol*. (2012)

Disclaimer

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