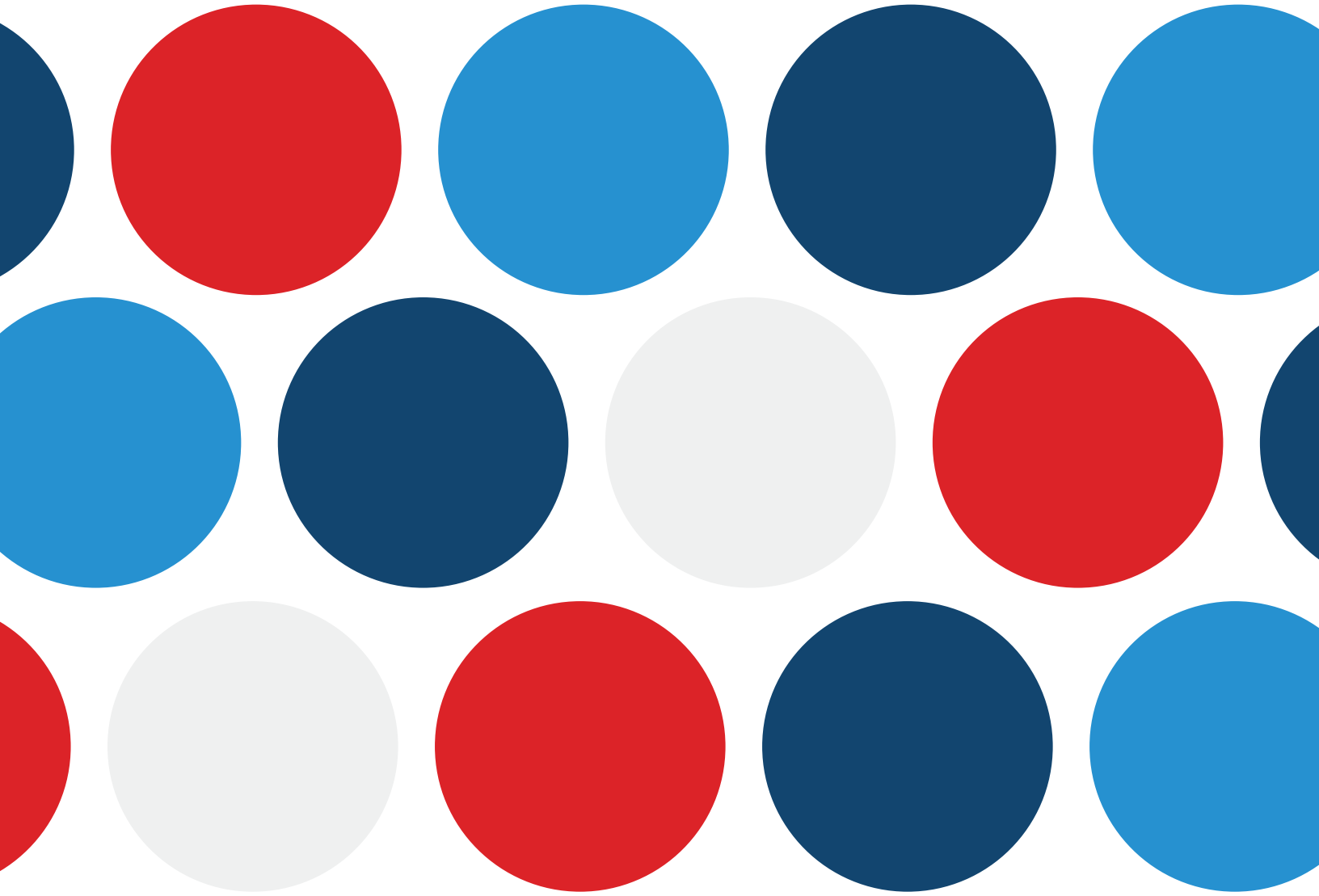
ROCKLAND



BLOOD & SERUM PRODUCTS

INTRODUCTION

Rockland produces a variety of blood products that are collected from healthy, fasted donors in our on-site laboratory and vivarium. The donors are monitored for health status and are unmedicated and maintained on an antibiotic-free diet.

Researchers using our products depend on consistency and safety, which is why Rockland focuses a significant time and resources on constructing world-class manufacturing processes. Each component used in our manufacturing process is developed within our facilities, ensuring that each step of the process can be certified and verified multiple times. **Our goal is to provide accountability and repeatable test results with each product we develop.**

RED BLOOD CELLS

Animal Red Blood Cells (RBCs) derive from whole blood, which is aseptically collected and prepared-to-order from our vivarium. One of Rockland's key areas of blood product development is sheep RBCs, which are used in a variety of applications, most commonly, erythrocyte rosetting or e-rosetting.

10% Washed Pooled Red Blood Cells	Buffer	Size	Catalog #
Bovine/Calf	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R400-0050
		100 mL	R400-0100
Chicken	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R401-0050
		100 mL	R401-0100
Guinea Pig	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R402-0050
		100 mL	R402-0100
Rabbit	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R403-0050
		100 mL	R403-0100
Rat	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R404-0050
		100 mL	R404-0100
Sheep	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R405-0050
		100 mL	R405-0100
	-	50 mL	R406-0050
		100 mL	R406-0100
Human	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R407-0050
		100 mL	R407-0100
Turkey	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R408-0050
		100 mL	R408-0100
Horse	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	50 mL	R409-0050
		100 mL	R409-0100

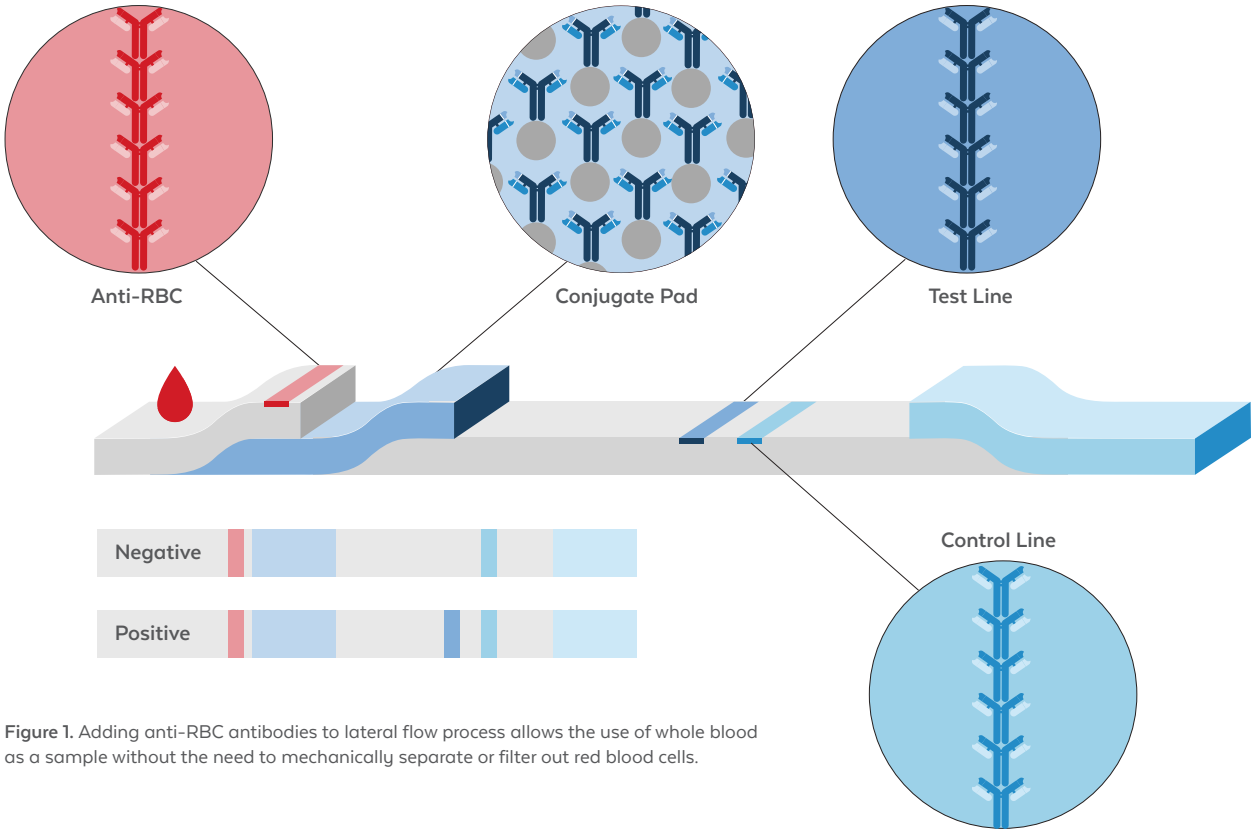


Figure 1. Adding anti-RBC antibodies to lateral flow process allows the use of whole blood as a sample without the need to mechanically separate or filter out red blood cells.

RED BLOOD CELL ANTIBODIES

Rockland produces anti-red blood cell antibodies to human and sheep hosts. Our anti-RBC antibodies can be used in agglutination assays where the clumping of erythrocytes is needed. Hemagglutination occurs when the antibody recognizes exposed surface epitopes of intact red blood cells. These antibodies are essential tools in qualitative *in vitro* diagnostic tests and are used as standalone tools or as part of point-of-care devices like lateral flow assays.

Antibody	Host	Size	Catalog #
Bovine Red Blood Cell RBC Antibody	Rabbit	50 mg	201-4139
		2 mL	101-4139
Chicken Red Blood Cell RBC Antibody	Rabbit	50 mg	203-4139
		2 mL	103-4139
Guinea Pig Red Blood Cell RBC Antibody	Rabbit	50 mg	206-4139
		2 mL	106-4139
Human Red Blood Cell Antibody	Rabbit	50 mg	209-4139
		2 mL	109-4139
Mouse Red Blood Cell RBC Antibody	Rabbit	50 mg	210-4139
		2 mL	110-4139
Rat Red Blood Cell RBC Antibody	Rabbit	50 mg	212-4139
		2 mL	112-4139
Sheep Red Blood Cell RBC Antibody	Rabbit	50 mg	213-4139
		2 mL	113-4139

NEW! GHOST RED BLOOD CELLS

Rockland's ghost Red Blood Cells (RBCs) were developed using proprietary methods unique to the host species, that allow our scientists to remove over 99% of hemoglobin from a pool of erythrocytes while leaving the membrane intact.

- Made to order
- Characterized, i.e. Hb removal $, cell counts (optional)
- Shipped international and domestic
- Ready in as little as 1 week

Host	Size	Catalog #
Bovine/Calf	5 mL	R700-005
Goat	5 mL	R704-005
Rabbit	5 mL	R709-005
Sheep	5 mL	R711-005

SERUMS

Rockland offer's both human serums and a variety of animal serums. These products are available in standard formulations or can be custom prepared to your exact requirements. Our heat-inactivated sterile serum can be used to increase precipitates and turbidity and is ideal for tissue engineering, inactivated complement assays, or as a cell culture supplement. Non-sterile serum is prepared with double clotting to ensure removal of all remaining components necessary for the clotting cascade.

	Serum	Size	Catalog #
Goat	Normal Goat Serum	10 mL	B304
	Goat Serum (sterile)	50 mL	D104-00-0050
		100 mL	D104-00-0100
		500 mL	D104-00-0500
		1 L	D104-00-1000
	Goat Serum (sterile/heat inactivated)	50 mL	D104-10-0050
		100 mL	D104-10-0100
		500 mL	D104-10-0500
		1 L	D104-10-1000
Horse	Normal Horse Serum	10 mL	B307
	Horse Serum (sterile)	50 mL	D107-00-0050
		100 mL	D107-00-0100
		500 mL	D107-00-0500
		1 L	D107-00-1000

	Serum	Size	Catalog #
Horse	Horse Serum (sterile/heat inactivated)	50 mL	D107-10-0050
		100 mL	D107-10-0100
		500 mL	D107-10-0500
		1 L	D107-10-1000
Human	Human Serum (lyophilized)	5 mL	B305
	Human Serum (sterile)	50 mL	D119-00-0050
		100 mL	D119-00-0100
		500 mL	D119-00-0500
		1 L	D119-00-1000
Mouse	Normal Mouse Serum	10 mL	B308
	Mouse Serum (sterile)	50 mL	D108-00-0050
		100 mL	D108-00-0100
		500 mL	D108-00-0500
		1 L	D108-00-1000
	Mouse Serum (sterile/heat inactivated)	50 mL	D108-10-0050
		100 mL	D108-10-0100
		500 mL	D108-10-0500
		1 L	D108-10-1000
Rabbit	Normal Rabbit Serum	10 mL	B309
	Rabbit Serum (sterile)	50 mL	D109-00-0050
		100 mL	D109-00-0100
		500 mL	D109-00-0500
		1 L	D109-00-1000
Rat	Normal Rat Serum	10 mL	B310
	Rat Serum (sterile)	50 mL	D110-00-0050
		100 mL	D110-00-0100
		500 mL	D110-00-0500
		1 L	D110-00-1000
	Rat Serum (sterile/heat inactivated)	50 mL	D110-10-0050
		100 mL	D110-10-0100
		500 mL	D110-10-0500
		1 L	D110-10-1000
Sheep	Normal Sheep Serum	10 mL	B311
	Sheep Serum (sterile)	50 mL	D111-10-0050
		100 mL	D111-10-0100
		500 mL	D111-10-0500
		1 L	D111-10-1000

PLASMA

Rockland plasma products are prepared with various anticoagulants, including sodium EDTA, sodium heparin, and potassium oxalate and can be custom prepared.

	Anticoagulant	Sterile/Non	50 mL	100 mL	500 mL	1 L
Bovine/Calf	ACD	(Non-sterile)	D400-01-0050	D400-01-0100	D400-01-0500	D400-01-1000
		(Sterile)	D500-01-0050	D500-01-0100	D500-01-0500	D500-01-1000
	Alsevers	(Non-sterile)	D400-02-0050	D400-02-0100	D400-02-0500	D400-02-1000
		(Sterile)	D500-02-0050	D500-02-0100	D500-02-0500	D500-02-1000
	Sodium Citrate	(Non-sterile)	D400-03-0050	D400-03-0100	D400-03-0500	D400-03-1000
		(Sterile)	D500-03-0050	D500-03-0100	D500-03-0500	D500-03-1000
	Sodium EDTA	(Non-sterile)	D400-04-0050	D400-04-0100	D400-04-0500	D400-04-1000
		(Sterile)	D500-04-0050	D500-04-0100	D500-04-0500	D500-04-1000
	Potatssium EDTA	(Non-sterile)	D400-05-0050	D400-05-0100	D400-05-0500	D400-05-1000
		(Sterile)	D500-05-0050	D500-05-0100	D500-05-0500	D500-05-1000
	Sodium Heparin	(Non-sterile)	D400-06-0050	D400-06-0100	D400-06-0500	D400-06-1000
		(Sterile)	D500-06-0050	D500-06-0100	D500-06-0500	D500-06-1000
	Lithium Heparin	(Non-sterile)	D400-07-0050	D400-07-0100	D400-07-0500	D400-07-1000
		(Sterile)	D500-07-0050	D500-07-0100	D500-07-0500	D500-07-1000
	Potassium Oxalate	(Non-sterile)	D400-08-0050	D400-08-0100	D400-08-0500	D400-08-1000
		(Sterile)	D500-08-0050	D500-08-0100	D500-08-0500	D500-08-1000
Chicken	ACD	(Non-sterile)	D402-01-0050	D402-01-0100	D402-01-0500	D402-01-1000
		(Sterile)	D502-01-0050	D502-01-0100	D502-01-0500	D502-01-1000
	Alsevers	(Non-sterile)	D402-02-0050	D402-02-0100	D402-02-0500	D402-02-1000
		(Sterile)	D502-02-0050	D502-02-0100	D502-02-0500	D502-02-1000
	Sodium Citrate	(Non-sterile)	D402-03-0050	D402-03-0100	D402-03-0500	D402-03-1000
		(Sterile)	D502-03-0050	D502-03-0100	D502-03-0500	D502-03-1000
	Sodium EDTA	(Non-sterile)	D402-04-0050	D402-04-0100	D402-04-0500	D402-04-1000
		(Sterile)	D502-04-0050	D502-04-0100	D502-04-0500	D502-04-1000
	Potatssium EDTA	(Non-sterile)	D402-05-0050	D402-05-0100	D402-05-0500	D402-05-1000
		(Sterile)	D502-05-0050	D502-05-0100	D502-05-0500	D502-05-1000
	Sodium Heparin	(Non-sterile)	D402-06-0050	D402-06-0100	D402-06-0500	D402-06-1000
		(Sterile)	D502-06-0050	D502-06-0100	D502-06-0500	D502-06-1000
	Lithium Heparin	(Non-sterile)	D402-07-0050	D402-07-0100	D402-07-0500	D402-07-1000
		(Sterile)	D502-07-0050	D502-07-0100	D502-07-0500	D502-07-1000

	Anticoagulant	Sterile/Non	50 mL	100 mL	500 mL	1 L
Chicken	Potassium Oxalate	(Non-sterile)	D402-08-0050	D402-08-0100	D402-08-0500	D402-08-1000
		(Sterile)	D502-08-0050	D502-08-0100	D502-08-0500	D502-08-1000
Goat	ACD	(Non-sterile)	D404-01-0050	D404-01-0100	D404-01-0500	D404-01-1000
		(Sterile)	D504-01-0050	D504-01-0100	D504-01-0500	D504-01-1000
	Alsevers	(Non-sterile)	D404-02-0050	D404-02-0100	D404-02-0500	D404-02-1000
		(Sterile)	D504-02-0050	D504-02-0100	D504-02-0500	D504-02-1000
	Sodium Citrate	(Non-sterile)	D404-03-0050	D404-03-0100	D404-03-0500	D404-03-1000
		(Sterile)	D504-03-0050	D504-03-0100	D504-03-0500	D504-03-1000
	Sodium EDTA	(Non-sterile)	D404-04-0050	D404-04-0100	D404-04-0500	D404-04-1000
		(Sterile)	D504-04-0050	D504-04-0100	D504-04-0500	D504-04-1000
	Potatssium EDTA	(Non-sterile)	D404-05-0050	D404-05-0100	D404-05-0500	D404-05-1000
		(Sterile)	D504-05-0050	D504-05-0100	D504-05-0500	D504-05-1000
	Sodium Heparin	(Non-sterile)	D404-06-0050	D404-06-0100	D404-06-0500	D404-06-1000
		(Sterile)	D504-06-0050	D504-06-0100	D504-06-0500	D504-06-1000
	Lithium Heparin	(Non-sterile)	D404-07-0050	D404-07-0100	D404-07-0500	D404-07-1000
		(Sterile)	D504-07-0050	D504-07-0100	D504-07-0500	D504-07-1000
	Potassium Oxalate	(Non-sterile)	D404-08-0050	D404-08-0100	D404-08-0500	D404-08-1000
		(Sterile)	D504-08-0050	D504-08-0100	D504-08-0500	D504-08-1000
Guinea Pig	ACD	(Non-sterile)	D405-01-0050	D405-01-0100	D405-01-0500	D405-01-1000
		(Sterile)	D505-01-0050	D505-01-0100	D505-01-0500	D505-01-1000
	Alsevers	(Non-sterile)	D405-02-0050	D405-02-0100	D405-02-0500	D405-02-1000
		(Sterile)	D505-02-0050	D505-02-0100	D505-02-0500	D505-02-1000
	Sodium Citrate	(Non-sterile)	D405-03-0050	D405-03-0100	D405-03-0500	D405-03-1000
		(Sterile)	D505-03-0050	D505-03-0100	D505-03-0500	D505-03-1000
	Sodium EDTA	(Non-sterile)	D405-04-0050	D405-04-0100	D405-04-0500	D405-04-1000
		(Sterile)	D505-04-0050	D505-04-0100	D505-04-0500	D505-04-1000
	Potatssium EDTA	(Non-sterile)	D405-05-0050	D405-05-0100	D405-05-0500	D405-05-1000
		(Sterile)	D505-05-0050	D505-05-0100	D505-05-0500	D505-05-1000
	Sodium Heparin	(Non-sterile)	D405-06-0050	D405-06-0100	D405-06-0500	D405-06-1000
		(Sterile)	D505-06-0050	D505-06-0100	D505-06-0500	D505-06-1000
	Lithium Heparin	(Non-sterile)	D405-07-0050	D405-07-0100	D405-07-0500	D405-07-1000
		(Sterile)	D505-07-0050	D505-07-0100	D505-07-0500	D505-07-1000
	Potassium Oxalate	(Non-sterile)	D405-08-0050	D405-08-0100	D405-08-0500	D405-08-1000
		(Sterile)	D505-08-0050	D505-08-0100	D505-08-0500	D505-08-1000

	Anticoagulant	Sterile/Non	50 mL	100 mL	500 mL	1 L
Mouse	ACD	(Non-sterile)	D408-01-0050	D408-01-0100	D408-01-0500	D408-01-1000
		(Sterile)	D508-01-0050	D508-01-0100	D508-01-0500	D508-01-1000
	Alsevers	(Non-sterile)	D408-02-0050	D408-02-0100	D408-02-0500	D408-02-1000
		(Sterile)	D508-02-0050	D508-02-0100	D508-02-0500	D508-02-1000
	Sodium Citrate	(Non-sterile)	D408-03-0050	D408-03-0100	D408-03-0500	D408-03-1000
		(Sterile)	D508-03-0050	D508-03-0100	D508-03-0500	D508-03-1000
	Sodium EDTA	(Non-sterile)	D408-04-0050	D408-04-0100	D408-04-0500	D408-04-1000
		(Sterile)	D508-04-0050	D508-04-0100	D508-04-0500	D508-04-1000
	Potatssium EDTA	(Non-sterile)	D408-05-0050	D408-05-0100	D408-05-0500	D408-05-1000
		(Sterile)	D508-05-0050	D508-05-0100	D508-05-0500	D508-05-1000
	Sodium Heparin	(Non-sterile)	D408-06-0050	D408-06-0100	D408-06-0500	D408-06-1000
		(Sterile)	D508-06-0050	D508-06-0100	D508-06-0500	D508-06-1000
	Lithium Heparin	(Non-sterile)	D408-07-0050	D408-07-0100	D408-07-0500	D408-07-1000
		(Sterile)	D508-07-0050	D508-07-0100	D508-07-0500	D508-07-1000
	Potassium Oxalate	(Non-sterile)	D408-08-0050	D408-08-0100	D408-08-0500	D408-08-1000
		(Sterile)	D508-08-0050	D508-08-0100	D508-08-0500	D508-08-1000
Rabbit	ACD	(Non-sterile)	D409-01-0050	D409-01-0100	D409-01-0500	D409-01-1000
		(Sterile)	D509-01-0050	D509-01-0100	D509-01-0500	D509-01-1000
	Alsevers	(Non-sterile)	D409-02-0050	D409-02-0100	D409-02-0500	D409-02-1000
		(Sterile)	D509-02-0050	D509-02-0100	D509-02-0500	D509-02-1000
	Sodium Citrate	(Non-sterile)	D409-03-0050	D409-03-0100	D409-03-0500	D409-03-1000
		(Sterile)	D509-03-0050	D509-03-0100	D509-03-0500	D509-03-1000
	Sodium EDTA	(Non-sterile)	D409-04-0050	D409-04-0100	D409-04-0500	D409-04-1000
		(Sterile)	D509-04-0050	D509-04-0100	D509-04-0500	D509-04-1000
	Potatssium EDTA	(Non-sterile)	D409-05-0050	D409-05-0100	D409-05-0500	D409-05-1000
		(Sterile)	D509-05-0050	D509-05-0100	D509-05-0500	D509-05-1000
	Sodium Heparin	(Non-sterile)	D409-06-0050	D409-06-0100	D409-06-0500	D409-06-1000
		(Sterile)	D509-06-0050	D509-06-0100	D509-06-0500	D509-06-1000
	Lithium Heparin	(Non-sterile)	D409-07-0050	D409-07-0100	D409-07-0500	D409-07-1000
		(Sterile)	D509-07-0050	D509-07-0100	D509-07-0500	D509-07-1000
	Potassium Oxalate	(Non-sterile)	D409-08-0050	D409-08-0100	D409-08-0500	D409-08-1000
		(Sterile)	D509-08-0050	D509-08-0100	D509-08-0500	D509-08-1000
Rat	ACD	(Non-sterile)	D410-01-0050	D410-01-0100	D410-01-0500	D410-01-1000
		(Sterile)	D510-01-0050	D510-01-0100	D510-01-0500	D510-01-1000

	Anticoagulant	Sterile/Non	50 mL	100 mL	500 mL	1 L
Rat	Alsevers	(Non-sterile)	D410-02-0050	D410-02-0100	D410-02-0500	D410-02-1000
		(Sterile)	D510-02-0050	D510-02-0100	D510-02-0500	D510-02-1000
	Sodium Citrate	(Non-sterile)	D410-03-0050	D410-03-0100	D410-03-0500	D410-03-1000
		(Sterile)	D510-03-0050	D510-03-0100	D510-03-0500	D510-03-1000
	Sodium EDTA	(Non-sterile)	D410-04-0050	D410-04-0100	D410-04-0500	D410-04-1000
		(Sterile)	D510-04-0050	D510-04-0100	D510-04-0500	D510-04-1000
	Potatssium EDTA	(Non-sterile)	D410-05-0050	D410-05-0100	D410-05-0500	D410-05-1000
		(Sterile)	D510-05-0050	D510-05-0100	D510-05-0500	D510-05-1000
	Sodium Heparin	(Non-sterile)	D410-06-0050	D410-06-0100	D410-06-0500	D410-06-1000
		(Sterile)	D510-06-0050	D510-06-0100	D510-06-0500	D510-06-1000
	Lithium Heparin	(Non-sterile)	D410-07-0050	D410-07-0100	D410-07-0500	D410-07-1000
		(Sterile)	D510-07-0050	D510-07-0100	D510-07-0500	D510-07-1000
	Potassium Oxalate	(Non-sterile)	D410-08-0050	D410-08-0100	D410-08-0500	D410-08-1000
		(Sterile)	D510-08-0050	D510-08-0100	D510-08-0500	D510-08-1000
Sheep	ACD	(Non-sterile)	D411-01-0050	D411-01-0100	D411-01-0500	D411-01-1000
		(Sterile)	D511-01-0050	D511-01-0100	D511-01-0500	D511-01-1000
	Alsevers	(Non-sterile)	D411-02-0050	D411-02-0100	D411-02-0500	D411-02-1000
		(Sterile)	D511-02-0050	D511-02-0100	D511-02-0500	D511-02-1000
	Sodium Citrate	(Non-sterile)	D411-03-0050	D411-03-0100	D411-03-0500	D411-03-1000
		(Sterile)	D511-03-0050	D511-03-0100	D511-03-0500	D511-03-1000
	Sodium EDTA	(Non-sterile)	D411-04-0050	D411-04-0100	D411-04-0500	D411-04-1000
		(Sterile)	D511-04-0050	D511-04-0100	D511-04-0500	D511-04-1000
	Potatssium EDTA	(Non-sterile)	D411-05-0050	D411-05-0100	D411-05-0500	D411-05-1000
		(Sterile)	D511-05-0050	D511-05-0100	D511-05-0500	D511-05-1000
	Sodium Heparin	(Non-sterile)	D411-06-0050	D411-06-0100	D411-06-0500	D411-06-1000
		(Sterile)	D511-06-0050	D511-06-0100	D511-06-0500	D511-06-1000
	Lithium Heparin	(Non-sterile)	D411-07-0050	D411-07-0100	D411-07-0500	D411-07-1000
		(Sterile)	D511-07-0050	D511-07-0100	D511-07-0500	D511-07-1000
	Potassium Oxalate	(Non-sterile)	D411-08-0050	D411-08-0100	D411-08-0500	D411-08-1000
		(Sterile)	D511-08-0050	D511-08-0100	D511-08-0500	D511-08-1000

ROCKLAND IMMUNOCHEMICALS, INC.

For 55 years, Rockland has supported the research, diagnostic, and biopharma communities by providing the highest quality antibodies, assays, and research services including primary and secondary antibodies, chemiluminescent substrates, custom polyclonal and monoclonal antibody production, and assay development.

Rockland antibodies, substrates, buffers, and services adhere to QSR / cGMP with full reporting and traceability (CFR:21H part 820), as well as optional analysis options that include ELISA, WB, IF, IHC, HPLC, and SDS-PAGE (1-D, 2-D).

Protect your experiment with Rockland antibodies and services.

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