



Gyrolab® Kits, CDs and REXXIP Buffers
Designed for **best results**

GYROS PROTEIN
Technologies



Automated. Nanoliter-scale. Market validated.

Trusted around the world

A majority of the world's leading biopharmaceutical companies and CROs use Gyrolab® immunoassay technology. Many have multiple systems. It's not hard to see why.

Gyrolab system is regarded as a must-have technology to accelerate biopharmaceutical development and production. Gyrolab delivers the performance needed for time critical workflows, including rapid assay development, handling small sample and reagent volumes, and the ability to measure over a broad dynamic range with minimal matrix interference.

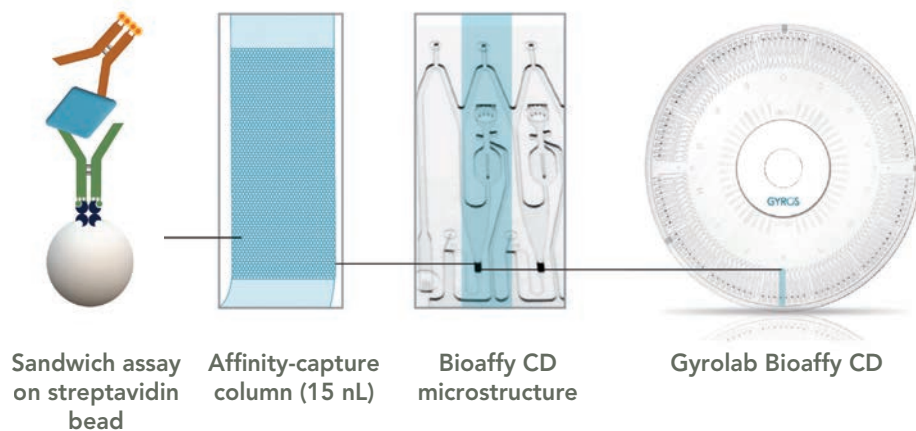
The Gyrolab system of hardware, software and consumables is constantly developing to meet the demands of applications such as cell line development, bioanalysis for bioprocessing, and pre-clinical PK/TK studies. You can use this open platform to set up assays with your own reagents together with Gyrolab CDs and REXXIP buffers. Alternatively, you can exploit the benefits of optimized ready to use kits that contain everything you need and also avoid method development.

This brochure presents the high quality Gyrolab consumables that will ensure the best results, whether you are developing your own assays or using our kits.

Gyrolab® CD's

The proprietary CD technology is engineered with highly reproducible microfluidic structures which integrate 15 nL flow-through affinity columns and high precision sample volume definition chambers that ensures reproducible sample and reagent additions to the affinity columns. See detailed illustration on next page. The affinity columns are filled with solid or porous streptavidin-coated beads for capture of biotinylated binding ligands. Detection is performed with a suitable fluorescence labelled detection reagent.

Sample and reagent additions are carefully controlled in the Gyrolab instrument by spinning the CD according to a method defined assay design protocol. The flow-through affinity micro-column format and short contact times eliminate incubations and minimizes matrix interference. The result is cost effective production of highly reproducible data over broad dynamic ranges.



Selection of CD

In general, the sample volume chamber in the CD determines the sensitivity of the assay. Many assays can be run using Gyrolab Bioaffy 200. If sensitivity is critical then Gyrolab Bioaffy 1000 is the CD of choice since it can process 1000 nL of sample. The porous particles included in Gyrolab Bioaffy 20 HC and Gyrolab 1000 HC CD allows for higher binding capacity. Gyrolab Bioaffy 20 HC is suitable when samples contain high analyte concentrations, such as in IgG in cell culture samples. Gyrolab Bioaffy 1000 HC has demonstrated improved performance when capture reagents displays low affinity binding to the analyte.

Gyrolab Mixing CD 96 can be used to integrate sample preparation steps that may include an acid dissociation step when analyzing anti-drug antibodies, or steps involving equilibration or enzymatic reactions.

Recommendations are to perform CD selection experiments prior to assay development to identify the CD for the required assay performance.

Automated nanoliter-scale immunoassays

Gyrolab technology simplifies immunoassay workflows in a CD format by eliminating incubations and shortening run times. Centrifugal force, capillary action and hydrophobic barriers precisely control the parallel processing of up to 112 data points per CD.

Analytes can be measured over a broad dynamic range, reproducibility is exceptional, and repeats are kept to a minimum. The automated workflow saves you time, sample and reagents.

Hydrophobic breaks

ensure consistent volume delivery

Overflow channel

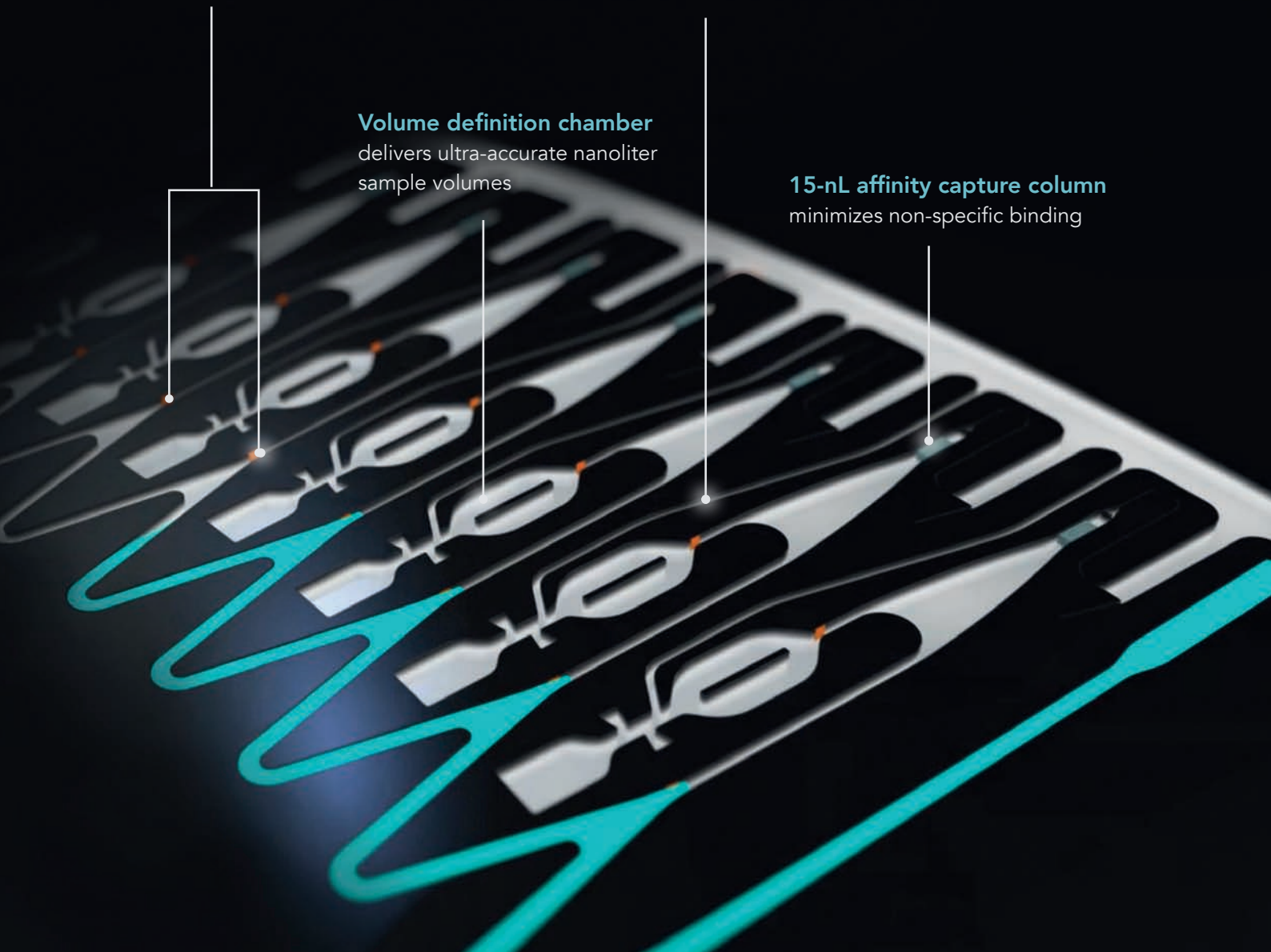
reduces need for pipetting accuracy

Volume definition chamber

delivers ultra-accurate nanoliter sample volumes

15-nL affinity capture column

minimizes non-specific binding



Ordering Information

Product Number	Product Name	Sample volume	Number of datapoints	Particle	Sensitivity*	Application**
P0004424	Gyrolab Bioaffy 20 HC	20	112	Porous	1X	Higher binding capacity for higher concentrations e.g. IgG titer, TK
P0004180	Gyrolab Bioaffy 200	200	112	Solid	10X	Standard CD for any application e.g PK
P0004253	Gyrolab Bioaffy 1000	1000	96	Solid	50X	Applications requiring higher sensitivity e.g. Biomarker
P0020245	Gyrolab Bioaffy 1000 HC	1000	96	Porous	50X	High binding capacity e.g. Low affinity reagents
P0020455	Gyrolab Mixing CD 96	200	96	Solid	N/A	Applications requiring Sample pre-treatment e.g. acid dissociation

*Achievable sensitivity depends on application.

**For guidance only. Recommendations are to perform CD selection experiments prior to assay development.

Storage of Gyrolab CDs

Refrigerate at + 4 °C to +8°C, unopened package.

Shelf life (unopened package): Minimum 12 months after delivery.

Opened CD package

CDs must be used within one week of opening. Return partially used CDs to original CD pouch. Re-seal the pouch with the zipper. Store dark, dry and at room temperature

Partially-used CDs can be run again. To guarantee optimal performance, Gyros Protein Technologies recommends using a new CD for each run.



INSIDE GYROLAB BIOAFFY CD

Gyrolab® Ready-to-Use Kits

Gyrolab® ready to use kits are optimized for fully automated analysis in Gyrolab Systems and provide fast turn-around, reproducibility and consistency of analysis without the need for assay development. Gyrolab ready to use kits contain sufficient reagents, CDs, buffers and consumables required for the indicated number of datapoints. The CD50 configurations of the kits are manufactured upon order and contain everything needed for 50 CD runs (50 x 96 data points). The CD50 reagents are conveniently supplied in volumes sufficient for 5 single CD runs in 10 bags to save storage space.



Ordering Information

Prod. No	Product Name	Description
Determination of human IgG concentrations in cell line development		
P0020381	Gyrolab huIgG Kit – Low Titer	Reagents and consumables for 96 datapoints (1 CD). Standard is not included.
P0020382	Gyrolab huIgG Kit – High Titer	Reagents and consumables for 112 datapoints (1 CD). Standard is not included.
P0020379	Gyrolab huIgG Standard (IgG1)	4 mg/mL, 50 µL.
Determination of leached Protein A		
P0020456	Gyrolab Protein A Kit for MabSelect SuRe™ Ligand	Reagents and consumables for 96 datapoints (1 CD).
Determination of CHO-HCP impurity levels		
P0020246	Gyrolab CHO-HCP Kit 1	Reagents and consumables for 96 datapoints (1 CD).
P0020424	Gyrolab CHO-HCP Kit 1 CD50	Reagents and consumables for 4800 datapoints (50 CD's). Made to order.
P0020605B	Gyrolab CHO-HCP E3G Kit	Reagents and consumables for 96 datapoints (1 CD).
P0020606B	Gyrolab CHO-HCP E3G CD50 Kit	Reagents and consumables for 4800 datapoints (50 CD's). Made to order.
P0020649B	Gyrolab CHO HCP E3G Standard	Standard for spiking experiments, 10 µg/mL, 50 µL
P0020489	Gyrolab CHO-HCP Kit Reagent F, 25 mL	Sample dilution buffer, 25 mL.
P0020544	Gyrolab CHO-HCP Kit Reagent F (10X100 mL)	Sample Dilution Buffer, 10 X 100 mL.
P0020667	Gyrolab Bioaffy 1000 HC Assay Toolbox	Includes CD, buffers and consumables to support development of process specific assays on Gyrolab open platform (1 CD).
P0020668	Gyrolab Bioaffy 1000 HC Assay Toolbox CD50	Includes CD, buffers and consumables to support development of process specific assays on Gyrolab open platform (50 CD's).
Determination of E. coli HCP impurity levels		
P0020625	Gyrolab E. coli HCP Kit	96 datapoints (1 CD).
P0020629	Gyrolab E. coli HCP CD50 Kit	Reagents and consumables for 4800 datapoints (50 CD's). Made to order.
P0020647	Gyrolab E. coli Sample Dilution Buffer	Sample dilution buffer, 25 mL.
P0020637	Gyrolab E. coli HCP Standard	2500 ng/mL, 50 µL. For spiking experiments.

Prod. No	Product Name	Description
For PK (pharmacokinetic) studies of human IgG in non-human species		
P0020499	Gyrolab Generic PK Kit	Reagents and consumables for 96 datapoints (1 CD). Standard is not included. Includes two Sample Dilution Buffers (Type E and Type F) for selection of most optimal buffer.
P0020617	Gyrolab Generic PK CD50 Type E Kit	Reagents and consumables for 4800 datapoints (50 CD's). Standard is not included. Made to order.
P0020619	Gyrolab Generic PK CD50 Type F Kit	Reagents and consumables for 4800 datapoints (50 CD's). Standard is not included. Made to order.
P0020641	Gyrolab Generic PK Kit Reagent E (10 x 100 mL)	Sample Dilution Buffer, 10 X 100 mL. Made to order.
P0020642	Gyrolab Generic PK Kit Reagent F (10 x 100 mL)	Sample Dilution Buffer, 10 X 100 mL. Made to order.
For TK (toxicokinetic) studies of human IgG in non-human species		
P0020500	Gyrolab Generic TK Kit	Reagents and consumables for 96 datapoints (1 CD). Standard is not included. Includes two Sample Dilution Buffers (Type E and Type F) for selection of most optimal buffer.
Cell and Gene Therapy		
P0020659	Gyrolab p24 Kit	Reagents and consumables to generate 96 data points.
P0020665	Gyrolab p24 CD50 Kit	Reagents and consumables to generate 4800 data points (50 CD's). Made to order.
P0020664	Gyrolab p24 Standard	1250 ng/mL, 400 µL. For spiking experiments.
P0020674	Gyrolab p24 Sample Dilution Buffer	Extra sample dilution buffer, 25 mL.
P0020695	Gyrolab AAVX Titer Kit	Reagents and consumables to generate 96 datapoints
P0020697	Gyrolab AAVX Titer CD50 Kit	Reagents and consumables to generate 4800 datapoints (50 CD's)
P0020695	Gyrolab AAVX Titer Sample Dilution Buffer	Sample dilution buffer, 25 mL

Gyrolab® Assay Protocols

Gyrolab systems are supported by an increasing range of ready-to-use kits and these open platforms are also recognized for their ability to enable the rapid in-house development and evaluation of high performance immunoassays. To accelerate access to robust immunoassays to a higher level, in addition we have prepared a number of protocols that have been rigorously tested to increase productivity while maintaining high quality requirements. New protocols will be added on a continuous basis.

Please visit www.gyrosproteintechnologies.com/gyrolab-assays

Rexxip Buffers



Rexxip buffers are designed to ensure that every sample enters and flows optimally through the microfluidic channels of a Gyrolab CD. Using the optimal buffer can enhance binding between analyte and reagent and minimize the risk of non-specific binding.

- Save time to assay development
- Maximize immunoassay performance
- Compatible with a variety of molecules with different analytical properties

Rexxip Buffer Selection Guide

PRIMARY USE	BUFFER							
	A / A-max	AN / AN-max	H / H-max	HN / HN-max	HX / HX-max	F	CCS	ADA
ADDITIVES	SALT	NEUTR	SALT NEUTR	NEUTR DET	DET			DET
Detection reagent buffer						•		
Recommended buffer if none of the below conditions apply	•							
Hydrophobic analyte					•	•		
Human and nonhuman primate samples (e.g. serum and plasma)								
Positively charged analyte, pI≥8				•				
Analyte with pI<8			•	*	•	**		
Animal samples (nonprimate)								
Positively charged analyte, pI≥8		•						
Cell culture samples with high protein concentration. Analyte is a therapeutic protein.								
Positively charged analyte, pI≥8		•						
Analyte with pI<8							•	
Anti-drug antibody samples								
Acidic conditions								•

*) First option, **) Second option

Salt: Increased ionic strength

Neutr: Reagents to neutralize heterophilic antibodies, e.g. HAMA

Det: Detergent

Rexxip max buffers are designed for sample dilutions 1:2.

Regular Rexxip buffers should be used for sample dilutions > 1:2.

Ordering Information

Product No.	Product Name	Volume
P0004820	Rexxip A	25 mL
P0004821	Rexxip A-max	25 mL
P0004822	Rexxip H	25 mL
P0004823	Rexxip H-max	25 mL
P0004994	Rexxip AN	25 mL
P0004995	Rexxip AN-max	25 mL
P0020033	Rexxip HX	25 mL
P0020034	Rexxip HX-max	25 mL
P0004996	Rexxip HN	25 mL
P0004997	Rexxip HN-max	25 mL
P0004824	Rexxip CCS	25 mL
P0004825	Rexxip F	10 mL
P0020027	Rexxip ADA	25 mL
P0020096	Gyrolab Wash Buffer pH 11	10 × 10 g

Certain Rexxip buffers are also available in 10 x 100 mL (1L). Please contact your local sales representative for more information.

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