

Flow Cytometry

The different way to explore Thrombosis and Haemostasis



The different way to explore

At the Heart of Haemostasis



As a major player in coagulation analysis, Stago continues to innovate in order to offer new analysis in **plasmatic coagulation**. However plasma is only a part of the truth. **Blood cells** are known to modulate haemostasis and play a role in some pathophysiological situations: this component is **Cellular Haemostasis**.

15 years ago Stago decided to investigate this new aspect of haemostasis by acquiring **skills in flow-cytometry.** It's one of the reasons why Stago decided to **welcome BioCytex into the group.** This advanced R&D company

> is in charge of developing **ready to use flow cytometric assays** for diagnosis applications related to haemostasis disorders.

Stago and its local representatives are pleased to inform you that these exclusive applications are now available in our catalog. The synergy of the Stago and BioCytex product lines ensures you the most comprehensive analysis of Haemostasis, our specialty.

Thrombosis and Haemostasis

From Biotechnology to Diagnosis



Since the foundation of BioCytex in the early 90's in the close proximity of the University and Hospital Complex of La Timone / La Conception in Marseille (France), the need of **standardisation in flow cytometry**



analysis still remains a topic of concern. Inter-laboratory reproducibility, day to day reproducibility and positivity and/or negativity threshold determination are a real need that can be addressed by the use of quantitative flow cytometry application kits. This is the expertise offered by BioCytex. We spent 7 years developing and tuning our **quantitative flow cytometry technology**.

After the success of our first generation of products with the QIFIKIT, BioCytex introduced Platelet kits, a comprehensive line of **no wash whole blood** flow cytometry kits for the **monitoring of antiplatelet drugs** as well as the diagnosis of **platelet disorders.** The same quantitative technology was applied to the development of kits for leukocyte and red cell receptor analysis. A major application is offered for the standardised diagnosis of Paroxysmal Nocturnal Hemoglobinuria (PNH). The product line resulting can be split as follows:

- Thrombotic risk
- Bleeding disorders
- Drug monitoring
- Vascular biology
- Customisable kits

Drug monitoring

Anti-Platelet Drugs

PLT VASP/P2Y12

Cat. Nr. 00449 - CE Marking

The reference for anti-P2Y12 drug monitoring

Intended use:

- Monitoring of specific platelet ADP receptor (P2Y12) antagonists (Ticlid[®], Plavix[®], Prasugrel[®])
- Drug discovery and validation of new P2Y12 antagonists

Main benefits:

- The most specific assay for P2Y12 inhibition*
- Insensitive to Aspirin®, Reopro® and Integrelin®
- Quick result: protocol < 30 minutes</p>
- Easy sample handling: stability up to
 48 h at room temperature.
- Standardised & reproducible analysis
- Only 30 µl citrated whole blood needed
- Kit for 10 tests

*Scientific file available upon request

Anti-Aggregant Drugs

Platelet Gpllb/Illa Occupancy

Cat. Nr. 00112 - For Research Use Only

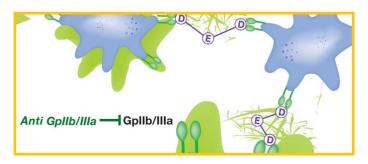
Kit for pharmacological evaluation of anti-aggregant drugs

Intended use:

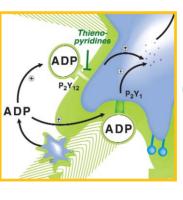
- Measurement of GpIIb/IIIa occupancy by GpIIb/IIIa antagonists (Reopro®, Integrelin®, Aggrastat®)
- Pharmacological and research studies related to new GpIIb/IIIa antagonists

Main benefits:

- One principle convenient for all anti-aggregant drugs: two antibodies (one sensitive to the presence of GpIIb/IIIa antagonist and one insensitive to the antagonist)
- Standardised & reproducible analysis
- Only 50 µl citrated whole blood needed
- Kit for 10 tests



ADP P2Y12 AC PGE1 Thienopyridines cAMP PKA PKA PKA Pitateet Pitateet





Thrombotic risk

Haematologic disorders and Thrombosis

Cellquant PNH and Redquant PNH Cat. Nr. 01000 - CE Marking Cat. Nr. 01003 - CE Marking

The diagnosis of Paroxysmal Nocturnal Haemoglobinuria (PNH)

Intended use:

Test interpretation

Analysis of CD55 and CD59 antigens on granulocytes (Cellquant PNH) and red blood cells (Redquant PNH).

Main benefits:

- Standardised & reproducible analysis Use of pre-calibrated beads
- **Quick result:** protocol < 45 minutes
- Ready-to-use
- Cut-off value clinically validated (3%)*
- Whole blood = for a better practicability
- Kits for 12 tests

*Scientific file available upon request

Nb of positive parameters	Cellquant PNH		Redqua	Diagnosis	
	CD55	CD59	CD55	CD59	Diagnosis
4					PNH
3					PNH
3					PNH
3					PNH
3					PNH
2					PNH
2					PNH
2					No PNH**
2					No PNH**
2					No PNH**
2					No PNH**
1					No PNH**
1					No PNH**
1					No PNH**
1					No PNH**
0					Normal
> 3%		**In these cas	ses, it is recomr	mended to perfe	orm a follow-up

test during the course of the disease for confirmation.

Example of one normal sample and one PNH sample detected with Cellquant PNH and Redquant PNH

< 3%

	Cellquant PNH CD55	Cellquant PNH CD59	Redquant PNH CD55	Redquant PNH CD59
	< 3%	< 3%	< 3%	< 3%
Normal Sample		D FL1	C FLI	D
	> 3%	> 3%	> 3%	> 3%
PNH Sample 1	c A	D Bu	C	D HJ

Bleeding disorders

Quantitative Flow Cytometry

PLT GP/Receptors Cat. Nr. 00111 - CE Marking

Quantitation of membrane glycoproteins on resting and activated platelets

Intended use:

Assessment of acquired and inherited thrombopathies*

- Glanzmann Thrombasthenia
- Bernard Soulier syndrome
- Fechtner syndrome
- X-linked thrombocytopenia
- Gray platelet syndrome like
- Platelet reactivity study
- Pharmacological and research studies related to platelet glycoproteins

Main benefits:

- Standardised & reproducible analysis
- Quantitative results expressed as absolute numbers of GP molecules per platelet
- Gpllb (CD41), Gplb (CD42b) and P Selectin (CD62P) quantitation
- Resting and TRAP-activated platelet
- Only 100 µl of citrated whole blood
- No wash method = time saver
- Kit for 5 tests

*Scientific file available upon request

Platelet PAlg

Cat. Nr. 00452 - For Research Use Only

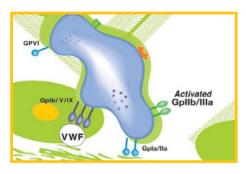
Quantitation of Platelet Associated Immunoglobulins

Intended use:

Screening for the presence of antibodies bound to the platelet surface of patients with ITP suspicion

Main benefits:

- Easy sample handling
 - No more than 2 ml EDTA whole blood (even if deep thrombopenia)
 - Stable up to 48 h room temperature
- Improved and quick washing step (GelSep[®] device)
- Quantitative results: Number of Ig/platelet
- Standardised & reproducible analysis
- **Specificity:** dual color analysis
- High sensitivity: ~100%
- Indirect assay possible (Patient serum on normal platelets)
- Quick result: protocol < 60 minutes</p>
- **Cost effectiveness:** reduces MAIPA testing
- Packaging fit to all laboratories (10 tests single or batch)

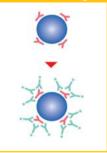


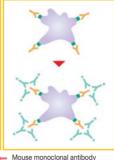
Adult normal range of platelet glycoprotein expression (n=40)

	Basal state	TRAP activation		
GMP 140 (CD62P)	< 1000	≥ 1000		
Gpllb (CD41)	51000 +/- 14000	85000 +/- 27000		
Gplb α (CD42b)	38000 +/- 11000	19000 +/- 10000		

Results expressed in Specific Antibody Binding Capacity

The only true quantitative flow cytometry



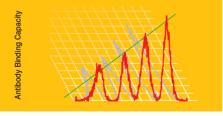


Specific monoclonal antibody

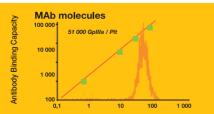
Anti-IgG-FITC

Precalibrated beads Resting or activated platelet Molecule to quantitate

Calibrated beads analysis







Vascular biology

Microparticles*

Megamix Cat. Nr. 00420 - For Research Use Only

The standardisation tool to analyse Microparticles (MP) by flow cytometry

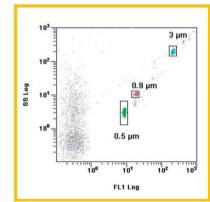
Intended use:

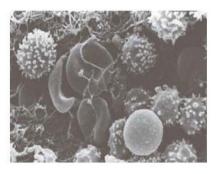
- Check intrinsic performances for MP analysis
- Set up your flow cytometer to analyse MP
- QC for day-to-day Cytometer performances to analyse MP
- QC for inter-instrument and inter-lab reproducibility

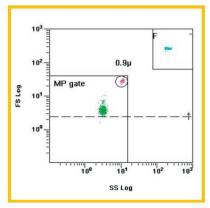
Main benefits:

- Mix of adequate fluorescent beads
- Help to set-up a 0.5 to 1.0 µm standard
 MP gate
- Standardised & reproducible analysis
- Kit for 50 tests

*Scientific file available upon request







Bead gating

0.5-1 µm standard MP gate set-up

Flow Cytometry Line

Ready-to-use kits

Product	Thrombosis risk	Bleeding disorders	Drug Monitoring	Vascular biology	Customisable kits	Cat. Nr.	Packaging	CE
PLT VASP/P2Y12	Х	Х	Х			00449	10 tests	Х
Platelet GpIIb/IIIa Occupancy	Х		Х			00112	10 tests	
Cellquant PNH	Х					01000	12 tests	Х
Redquant PNH	Х					01003	12 tests	Х
PLT GP/Receptors		Х				00111	5 tests	Х
Platelet GP Screen		Х				00418	10 tests	
Platelet PAlg		Х				00452	10 tests	
PLT HPA-1		Х				00419	10 tests	Х
Megamix				Х		00420	50 tests	
Cellquant FF-CD146				Х		01002	12 tests	
Platelet Calibrator					Х	00457	50 tests	
Cellquant Calibrator					Х	01001	50 tests	

Available monoclonal antibodies

Specificity	Purified* (0.1 mg)	FITC (100 tests)	PE (100 tests)	Biotin (100 tests)
Negative isotypic control IgG1	Х	Х	Х	
Negative isotypic control IgG2a	Х	Х	Х	
Negative isotypic control IgG2b	Х	Х	Х	
Bound Fibrinogen		Х		
CD32	Х			
CD36	Х	Х	Х	
CD41	Х	Х	Х	
CD42b	Х	Х	Х	
CD61	Х	Х	Х	
CD62P	Х	Х	Х	
CD146 (endothelial cells)	Х	Х	Х	Х

* Can be used with Platelet Calibrator





For further information, please contact:



Diagnostica Stago S.A.S. RCS Nanterre B305 151 409 9, rue des Frères Chausson 92600 Asnières sur Seine (France) Ph. +33 (0)1 46 88 20 20 Fax: +33 (0)1 47 91 08 91 stago@stago.fr www.stago.fr