

ANIARA

DIAGNOSTICA

5-D | HYPHEN BIOMED | MEDICAGO | XENOMETRIX

Aniara Diagnostica is a distributor for Hyphen BioMed

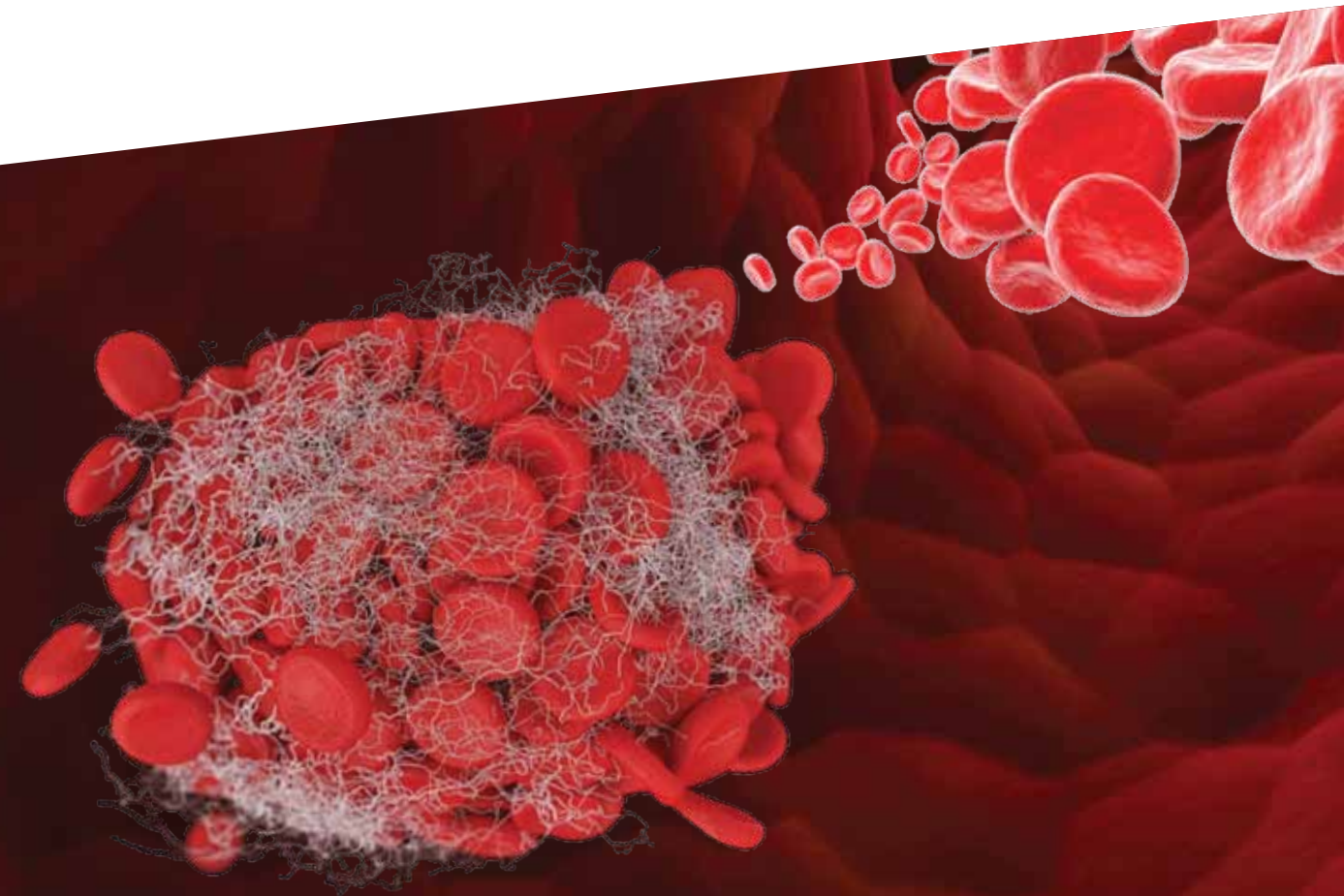
From the INNOVATION LEADER in Thrombosis & Hemostasis

More information on HYPHEN BioMed and product catalog is available at :

www.aniara.com

H-004-00 Carefully read the instructions on the labeling and/or the instructions for use of the reagents.

Immunoturbidimetric Assay for
Quantitation of Free Protein S:Ag
LIAPHEN™ Free Protein S



- Specific and reliable assay, without interferences of anticoagulants and sample content
- Extended measurement range (6-300% Free PS)
- Automatable, Ready-to-use Liquid Reagent

© Can Stock Photo / somersault1824 / Alexmit



Immunoturbidimetric Assay for Quantification of Free Protein S:Ag

LIAPHEN™ Free Protein S

Improve your routine with LIAPHEN™ Free Protein S:

Convenient, and Economical with extended stability:

- **Liquid reagent:** ready-to-use
- **Automated:** validated application guide for the major coagulation analyzers
- **Stable after opening:** 10 days onboard*, 4 months at 2-8°C, 2 weeks at 18-25°C
- **Long shelf life** at 2-8°C in original packaging

* may depends on the instruments

Specific and reliable assay:

- **MoAbs highly specific to PS**
- **Specificity verified with PS deficient plasma:** PS % < LOD
- **No interference of plasma contents and anticoagulants:** Hemoglobin, bilirubin, intralipids, heparins, DOACs, high Fibrinogen, high platelet count, presence of Rheumatoid factor (up to 3,000 IU/mL)

Extended measurement range (6-300% Free PS*) useful to explore various contexts:

- No prozone effect up to 600%
- Specificity for free PS confirmed with a normal plasma supplemented with C4b-BP in excess.

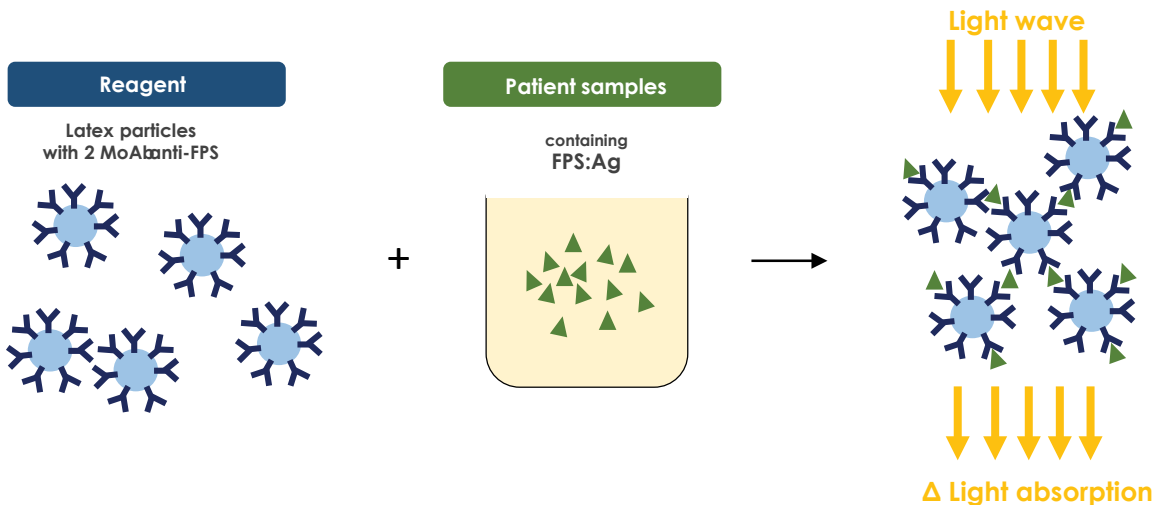
Excellent Precision with very low CVs:

- Within-run < 2.5% *
- Between-run < 1.9% *

* example of Sysmex CS-5100

Assay Principal

LIAPHEN™ Free Protein S is an immunoturbidimetric method, based on antigen-antibody reaction. Free PS:Ag, present in the tested sample, reacts with Latex particles sensitized with two mouse monoclonal anti-Free PS antibodies, leading to latex particles agglutination. This agglutination can be directly detected by a change of absorbance. The absorbance change is directly proportional to the amount of Free PS:Ag in the sample.



Protein S and its deficiency

Protein S (PS) is a vitamin K dependent glycoprotein, mainly synthesized in liver. Its concentration in normal human plasma is of about 25 µg/mL. About 40% (i.e. 10 µg/mL) is in the Free form and 60% (i.e. 15 µg/mL) circulates in blood as a non-covalent complex with C4b-BP. The balance between the free form and the C4b-BP bound form of protein S plays an important role, as only the Free PS is active through its anticoagulant activity as the cofactor of Activated Protein C. Congenital or acquired PS deficiencies are associated with an increased risk of venous thromboembolism.

Type		Description	
Inherited PS deficiencies	Type I	decreased total and free PS levels (quantitative defects)	*Type I and III deficiencies account for 95% of cases of PS deficiency
	Type II	decreased PS activity but normal antigenic levels (rare qualitative defects)	
	Type III	normal levels of total PS but decreased free PS (quantitative defect).	
Acquired PS deficiencies		In the early stages of inflammatory diseases, Free PS concentration is decreased because of an elevation of C4b-BP.	
		PS may be decreased in various contexts such as in hepatic disorders, nephrotic syndrome, viral infections, DIC.	
		PS may be decreased in various medications such as dicoumarol or L-asparaginase therapy, related to oral contraceptives intake or oestrogen therapy	
		Free PS may also be decreased in new-borns and during pregnancy.	

Assay Characteristics

* Example obtained with Sysmex CS-5100 (refer to the instrument specific method application)

Precision

Control	Intra-assay				Inter-assay			
	N	Mean %	CV %	SD	N	Mean %	CV %	SD
Normal	40	97.7	2.5	2.4	30	95.3	1.2	1.1
Pathological	40	29.0	1.8	0.5	30	29.9	1.9	0.6

Limits

Analytical measurement zone	
Concentration Free PS:Ag (%)	6 – 300*

*¹⁾ with redilution

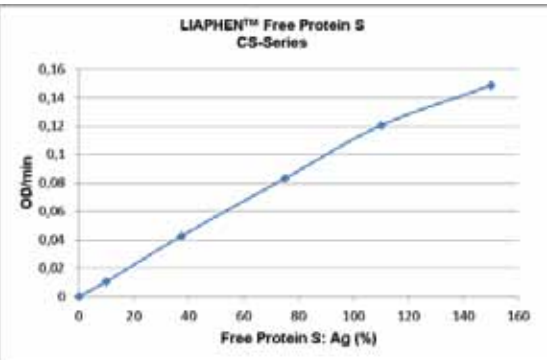
Measurement Range

Measurement Principle	Calibration Range	
Immunoturbidimetric method	Concentration of Free PS:Ag (%)	0.0 – 150.0*
	Raw values (OD/min)	0.0003 – 0.1486*

*³⁾ Values dependent on the calibrator.

*⁴⁾ These values are given for information and may vary from one batch to another and from one analyzer to another.

Example of Calibration Curve



Order information:

	Product name	Kit presentation	Ref N°:	Status
Latex automated Immunoturbidimetric Assay	LIAPHEN™ Free Protein S	R1: Reaction Buffer R2: Latex	A120004-RUO	RUO

Additional products required:

	Product name	Ref N°:	Status
Calibrator	BIOPHEN™ Plasma Calibrator	A222101-RUO	RUO
Controls	BIOPHEN™ Normal Control Plasma BIOPHEN™ Abnormal Control Plasma	A223201-RUO A223301-RUO	RUO RUO
Buffer	Imidazole Buffer	AAR021A-RUO AAR021K-RUO AAR021L-RUO	RUO RUO RUO

Related products:

	Product name	Ref N°:	Status
Clotting	HEMOCLOT™ Protein S	ACK041K-RUO	RUO
ELISA	ZYMUTEST™ Free PS	ARK015A-RUO	RUO
ELISA	ZYMUTEST™ Total PS	ARK021A-RUO	RUO

Please contact us at info@aniara.com