

your partner in coagulation!



PRODUCT CATALOGUE

D I A G N O S T I C S

Global Tests | Calibrators & Controls | Factor Assays | von Willebrand Diseases & TTP | Anticoagulant Treatments
 Thrombophilia Thrombosis | Fibrinolysis | Thrombin Generation | Instruments | Research Products

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Company Information

Technoclone Herstellung von Diagnostika und Arzneimitteln GmbH was founded in 1987 by Prof. Dr. Bernd R. Binder (*1945 - †2010). The main focus of the company was on monoclonal antibodies against components of the coagulation and the fibrinolytic systems. Worldwide Technoclone was the first company offering a complete set of ELISAs and of a novel patented system allowing determination of activity and antigen in the same test run (Actibind) in the field of fibrinolysis.

Additional to the continuously increasing test portfolio, Technoclone expanded rapidly through the acquisition of the former Immuno diagnostics from Baxter AG in 1998 and the establishment of an worldwide distribution system. In 2019 Technoclone expanded it's headquarter in Vienna, where development and production is set, by more than doubling the space.

Production and OEM Products

Technoclone is a world-leading producer of diagnostics tests, equipment and research products in the area of haemostasis and fibrinolysis. Next to a complete test portfolio in routine and specialty testing Technoclone has improved their fully automated Ceveron alpha / alpha TGA instruments to the new Ceveron 100 Series instrument line. With more than 10 years of experience of fully automated Thrombin Generation testing, the new Ceveron 100 series instruments have increased the TGA testing capacity by 50% . Additionally using the quenching technology on the top line system the Ceveron s100, Technoclone offers the first fully automated haemostasis analyzer worldwide which is able to run routine and specialty testing out of one sample simultaneously, including Thrombin Generation, ADAMTS13 activity and Factor XIII activity fully automated.

Technoclone's high quality in vitro diagnostics and test systems are sold worldwide not only under the Technoclone label but are also found as OEM products in the portfolio of international leading diagnostic companies.

Research & Development

The focus of Technoclone's research and development is in the field of thrombosis and cardiovascular diseases, the world leading cause of mortality and morbidity. Research and development is pursued in Technoclone's own research division and in close cooperation with universities and international and national research consortia. Technoclone holds various international patents in the field of diagnosis and therapy of vascular diseases.

„On the forefront of diagnostic challenges of tomorrow“

ISO 9001 , ISO 13485 and MDSAP certified

Certificates can be downloaded from www.technoclone.com

Actibind, Ceveron, Dapttin, Technochrom, Technoclot, Technofluor, Technoleia, Technoplastin, Technothrombin, Technoview, and Technozym, are registered Trade Marks of Technoclone Herstellung von Diagnostika und Arzneimitteln GmbH.

All products are for research use only in Canada and USA at date of printing.

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Prothrombin Time (PT)

The **Technoplastin HIS** reagents are derived from rabbit brain thromboplastin. Technoclon PT reagents are a mixture of tissue factor, phospholipid, and calcium.

The Prothrombin Time (PT) is used for:

- Screening for congenital or acquired deficiencies in the extrinsic and common pathways
- Monitoring warfarin therapy
- An aid in the diagnosis of DIC
- An aid in the diagnosis of inhibitors to Factors II, V, VII, and X

For Vitamin K antagonists (VKA) monitoring the most common reporting method is the INR; in certain countries an alternative normalization method known as the Prothrombin percent activity, is used.

INR is based on the following formula:

$$INR = \left(\frac{PT_{patient\ plasma} (sec)}{PT_{normal\ plasma} (sec)} \right)^{ISI}$$

The **Technoclot PT Owren** is a thromboplastin reagent modified according to Owren. The reagent is enriched with bovine plasma from which the prothrombin complex factors II, VII and X have been removed by adsorption. The bovine plasma remains a source of fibrinogen and factor V, therefore abnormalities in these proteins cannot be detected by the test.

The reagent is available in two formats, one for the **manual** method and one for **automated** use on fully automated coagulation analyzers.

A demonstration video is available on the Technozoom YouTube Channel (QR-Code)



For calibration & control material see page 6 and 7.

Product	Description	REF	Package
Technoplastin HIS ISI < 1.2	Lyophilized rabbit brain thromboplastin.	5003009	12 x 2 mL
		5003030	2 x 10 mL
		5003026	6 x 10 mL
		5003021	20 x 10 mL
Technoplastin HIS Ceveron for Ceveron alpha / 100 Series ISI < 1.2	Lyophilized rabbit brain thromboplastin.	5003010	12 x 4 mL
		5003028	6 x 20 mL
		5003022	20 x 20 mL
Technoclot PT Owren manual ISI < 1.2	Lyophilized thromboplastin. For the determination of the combined factors II-VII-X.	5005032	10 x 4 mL
		5005037	10 x 10 mL
Technoclot PT Owren automated ISI < 1.2	Lyophilized thromboplastin. For the determination of the combined factors II-VII-X.	5005044*	10 x 4 mL
		5005046*	10 x 10 mL
*Auxiliary material required and not supplied with the kit			
CaCl₂ 25 mM	Reaction buffer for Technoclot PT Owren automated.	5277017	1 x 25 mL
		5277020	6 x 25 mL
Imidazole Buffer	Sample dilution buffer for Technoclot PT Owren automated.	5410008	1 x 25 mL
		5410007	6 x 25 mL

Activated Partial Thromboplastin Time (aPTT)

Technoclone **aPTT reagents** are mixtures of different ratios of activators and phospholipids in order to provide reagents with different sensitivities to heparin, lupus anticoagulants and extrinsic factors.

The aPTT test is used for:

- Screening for congenital or acquired deficiencies in the intrinsic and contact pathways
- Monitoring heparin therapy
- An aid in the diagnosis of Lupus Anticoagulants
- An aid in the diagnosis of inhibitors to Factors VIII, IX, XI and XII

aPTT measurement reflects the time forming a fibrin clot via the intrinsic clotting pathway. Results are reported in seconds or ratio. For monitoring anticoagulant drugs the results are often expressed as a multiple of the mean normal time.

aPTT Reagents:	DAPTTIN TC	SIRON LS (Lupus Sensitive)	SIRON LIS (Lupus Insensitive)
Factor Sensitivity	++	+++	+++
Lupus Sensitivity	++	+++	+
Heparin Sensitivity	++	++	++

For control material see page 7.

Product	Description	REF	Package
Dapttin	Lyophilized double activated aPTT reagent with sulfatides and silica as surface activators.	5035060	5 x 2 mL
		5035090	6 x 10 mL
		5035100	20 x 10 mL
Siron LS	Liquid lupus sensitive aPTT reagent containing a soluble activator prepared from ellagic acid.	5035105	2 x 4 mL
		5035107	10 x 4 mL
		5035109	10 x 10 mL
Siron LIS	Liquid lupus insensitive aPTT reagent containing a soluble activator prepared from ellagic acid.	5035118	2 x 4 mL
		5035119	10 x 4 mL
		5035121	10 x 10 mL
Auxiliary material required and not supplied with the kit			
CaCl₂ 25 mM		5277017	1 x 25 mL
		5277020	6 x 25 mL

GLOBAL TESTS

Fibrinogen

The **Fibrinogen reagent** of Technoclone is a modified Clauss Reagent with a high thrombin concentration to make the test virtually insensitive to heparin and to enhance clot detection.

The Fibrinogen is used for:

- the diagnosis of DIC
- the diagnosis of liver failures
- detecting qualitatively abnormalities of fibrinogen
- determining quantitatively deficiency of fibrinogen

Technoclone Fibrinogen Reagent is a functional assay based upon the time for fibrin clot formation. The results are expressed in g/dL and read off a calibration curve.

For calibration & control material see page 6 and 7.

Product	Description	REF	Package
Fibrinogen reagent kit	Fibrinogen kit based on the Clauss method for the quantitative determination of Fibrinogen in human citrated plasma. Including reagent and calibrator.	5138005	~ 45 tests
Fibrinogen C	Lyophilized fibrinogen reagent ~ 80 I.U. mL.	5138080 5138085	5 x 5 mL 5 x 2 mL
Auxiliary material required and not supplied with the kit			
Imidazole Buffer	Imidazole buffer solution for sample pre dilution.	5410008 5410007	1 x 25 mL 6 x 25 mL

Thrombin Time

The **Thrombin Time reagent** is a standardized thrombin time reagent produced from bovine thrombin for the normal and therapeutic (heparin and fibrinolytic) ranges.

The Thrombin Time is used :

- to detect qualitatively abnormalities of fibrinogen
- to assess the effectiveness of fibrinolytic therapy

The Thrombin Time reflects the time taken forming a fibrin clot after the addition thrombin. The results are reported in seconds. If a sample's clotting time is prolonged beyond the reference range, the fibrinogen level or its activity is low. Also or thrombin inhibitors e.g. heparin or other direct thrombin inhibitors may be present.

For control material see page 7.

Product	Description	REF	Package
Thrombin Time	Lyophilized thrombin time reagent.	5100005	6 x 6 mL

CALIBRATOR & CONTROL MATERIAL

Technoclone offers two different Calibrator and Control Series.

The **Coagulation Series** includes values for screening tests, factor assays and inhibitors, not only for Technoclone reagents but also for screening tests reagent/analyser combinations of competitor reagents. All values are therefore established internally and externally.

The **Technoclot Series** includes values of classical routine and screening tests. All values are established with Technoclone reagents.

	Coagulation Series	Technoclot Series
PT aPTT	✓ ✓	✓ ✓
Fibrinogen Fibrinogen cleavage Thrombin Time	✓ ✓ ✓	✓ ✓
FII FV FVII FVIII FIX FX FXI FXII FXIII HMWK Prekallikrein	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
ADAMTS13 Act	✓	
VWF AT C1-INH	✓ ✓ ✓	✓
Protein C Protein S	✓ ✓	

Reference Plasma

Reference Plasma is used as a calibration material for the assays mentioned above in the Coagulation Series.

Product	Description	REF	Package
Coagulation Reference	Lyophilized calibration plasma for screening tests, factor assays and inhibitors.	5220110	5 x 1 mL
		5220120	50 x 1 mL

Special PT Calibration Set

AK-Calibrant is a calibration set containing 4 calibration plasmas for PT standardization. A normal plasma and 3 native warfarin plasmas (PIVKA) of different levels for INR calibration.

- For generation of INR reference curves and direct INR determination.
- Determination of the laboratory specific ISI-values and MNPT.
- Generation of reference curves in percentage of norm.

Product	Description	REF	Package
AK-Calibrant	Calibrator Set of 4 calibrators (~ 1- 4 INR).	5010004	4 x 1 mL

CALIBRATOR & CONTROL Material

Normal Control Plasma

Normal Control Plasma is used to determine and monitor the accuracy and precision of the functional assays.

Product	Description	REF	Package
Coagulation CON N	Lyophilized normal control plasma for screening tests, factor assays and inhibitors.	5020040	5 x 1 mL
		5020050	50 x 1 mL
Technoclot CON N	Lyophilized normal control plasma for classical screening and routine assays (PT/aPTT/Fibrinogen/TT/AT).	5020070	10 x 1 mL
		5020075	50 x 1 mL

Abnormal Control Plasma

Abnormal Control Plasma is used to determine and monitor the accuracy and precision of the functional assays.

Product	Description	REF	Package
Coagulation CON A	Lyophilized abnormal control plasma for screening tests, single factors and inhibitors.	5021055	5 x 1 mL
		5021060	50 x 1 mL
Technoclot CON A	Lyophilized abnormal control plasma for classical screening and routine assays (PT/aPTT/Fibrinogen/TT/AT).	5021070	10 x 1 mL
		5021075	50 x 1 mL

Special PT Control Sets

The **AK-Verification** is a tri-level quality control set for the verification of International Normalized Ratio (INR) reporting.

Coagulation CON AK is a Control plasma for use as an accuracy control for oral anticoagulant therapy monitoring. The plasma is prepared from donors who have been on long-term anticoagulant therapy.

Product	Description	REF	Package
AK-Verification	Control Set of 3 lyophilized control plasmas (~ 2-4 INR) .	5010024	3 x 1 mL
Coagulation CON AK	Lyophilized control plasma (~ 2.5 INR).	5011050	5 x 1 mL
		5011060	50 x 1 mL

Custom made EQA Material

Technoclone provides for more than 30 years different External Quality Assessment (EQA) companies around the world with highest quality control material for their programs. All materials are liquid nitrogen lyophilized, or frozen to provide you with the best stability for your surveys.

Standard Control material for EQA. Special needs can be fulfilled upon requests.

Filling Volume	500 µl – 10 ml
Vial type	Siliconized glass vials: 3 ml, 5 ml or 20 ml
Screw cap	8 different colors of your choice: white, yellow, blue, red, pink, turquoise, purple and brown
Labelling & Packing	Labelling and packaging service according to customer's specifications
Lot Size	200 - 150.000 vials / per lot

Product	Description
Normal & Abnormal Control Plasma	Lyophilized, Normal and Abnormal control plasma for routine and speciality testing with different abnormal levels. e.g. Abnormal or normal fibrinogen levels.
INR Plasma Controls	Lyophilized, INR plasma with different INR Levels between 1 - 5.
DOAC Control Plasma	Lyophilized, control plasma with different levels of Apixaban, Argatroban, Dabigatran, Edoxaban, Orgaran and Rivaroxaban,
Heparin Control Plasma	Lyophilized, control plasma with different levels of Unfractionated Heparin and Low Molecular Weight Heparin .
Lupus Control Plasma	Lyophilized, negative and positive control plasma with different levels of LA Ratio.
Factor Plasma	Lyophilized, plasma with different activity levels of single factors.
Fibrinolysis Control Plasma	Lyophilized, Fibrinolysis control plasma with different levels PAI-1, t-PA, u-PA, scu-PA, CnBr Fibrinogen fragments, Plasminogen, Alpha-2-antiplasmin, Vitronectin and Fibronectin.

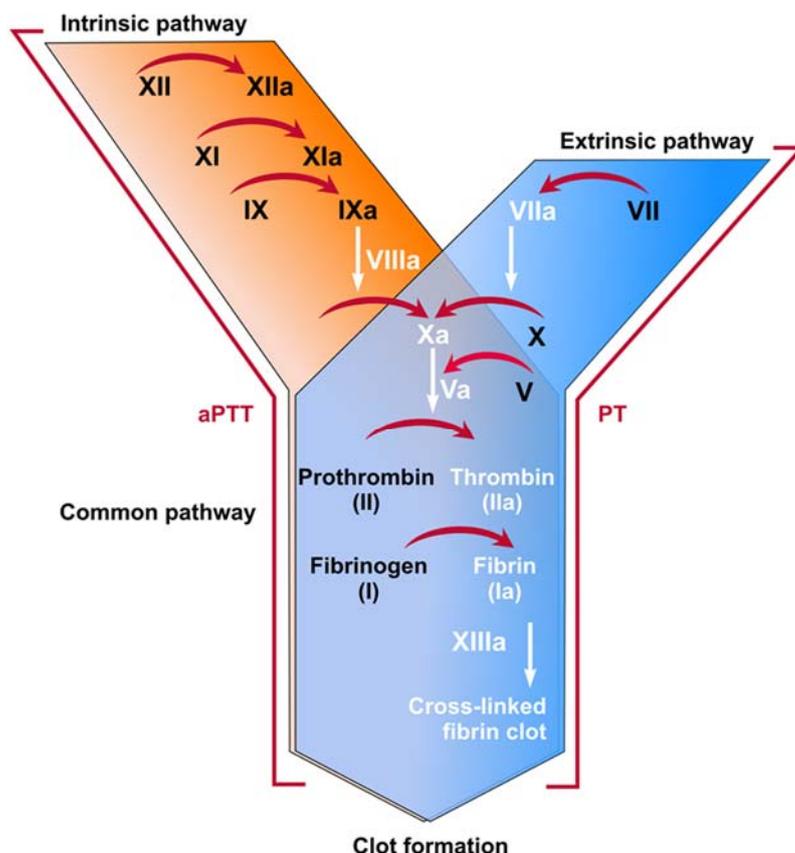
FACTOR ASSAYS

Factor deficiencies are both congenital and acquired. Factor assays provide a quantitative determination of activity. A dilution of the patient sample is added to deficiency plasma of the factor of interest and run in a PT (for the extrinsic and the common pathway factors) or in an aPTT (for the intrinsic factors).

Factor activity assays are calibrated with a plasma of known concentration of the factor of interest like the Coagulation Reference with defined factor activities.

Factor activity assays are reported in % activity or international Units (VIII and IX).

For calibration & control material see page 6 and 7.



Deficient Plasma extrinsic and the common pathway (PT)

Factors of the extrinsic and the common pathway are tested with Prothrombin Time (PT) reagents using plasma deficient of factor II, V, VII and X.

Product	Description	REF	Package
Factor II DP	Lyophilized Factor II deficient plasma, Immunodepleted.	5114008	5 x 1 mL
Factor V DP	Lyophilized Factor V deficient plasma, Immunodepleted.	5134004	5 x 1 mL
Factor VII DP	Lyophilized Factor VII deficient plasma, Immunodepleted.	5144015	5 x 1 mL
Factor X DP	Lyophilized Factor X deficient plasma, Immunodepleted.	5174006	5 x 1 mL
	Lyophilized Factor X deficient plasma, Native.	5174004	5 x 1 mL

Auxiliary material required and not supplied with the kit

Citrate Buffer	Dilution buffer for determination of coagulation factors II, V, VII and X with PT reagents.	5400045	1 x 60 mL
		5400047	1 x 25 mL

FACTOR ASSAYS

Deficient Plasma intrinsic pathway (aPTT)

Factors of the intrinsic pathway are tested with activated Partial Thromboplastin Time (aPTT) reagents using plasma deficient of factor VIII, IX, XI and XII as well as HMWK and Prekallikrein.

Product	Description	REF	Package
Factor VIII DP	Lyophilized Factor VIII deficient plasma, Immunodepleted.	5154002 5154004	5 x 1 mL 50 x 1 mL
Factor VIII DP native	Lyophilized Factor VIII deficient plasma, Native.	5154007 5154016	5 x 1 mL 50 x 1 mL
Factor IX DP	Lyophilized Factor IX deficient plasma, Immunodepleted.	5164003 5164004	5 x 1 mL 50 x 1 mL
Factor IX DP native	Lyophilized Factor IX deficient plasma, Native.	5164008 5164016	5 x 1 mL 50 x 1 mL
Factor XI DP	Lyophilized Factor XI deficient plasma, Native.	5184004	5 x 1 mL
Factor XI DP native	Lyophilized Factor XI deficient plasma, Immunodepleted.	5184006	5 x 1 mL
Factor XII DP	Lyophilized Factor XII deficient plasma, Native.	5194008	5 x 1 mL
Factor XII DP native	Lyophilized Factor XII deficient plasma, Immunodepleted.	5194007	5 x 1 mL
HMWK DP	Lyophilized high molecular weight kininogen deficient plasma, immunodepleted.	5204006	2 x 1 mL
Prekallikrein DP native	Lyophilized prekallikrein deficient plasma, Native.	5205006	2 x 1 mL
Auxiliary material required and not supplied with the kit			
Imidazole Buffer	Dilution buffer for use in factors VIII, IX, XI, XII and factor VIII Inhibitor, Protein C and Fibrinogen.	5410008 5410007	1 x 25 mL 6 x 25 mL
CaCl₂ 50 mM	Dilution buffer for determination of Fitzgerald and Fletcher Trait Plasma in clotting method.	5279027	1 x 25 mL

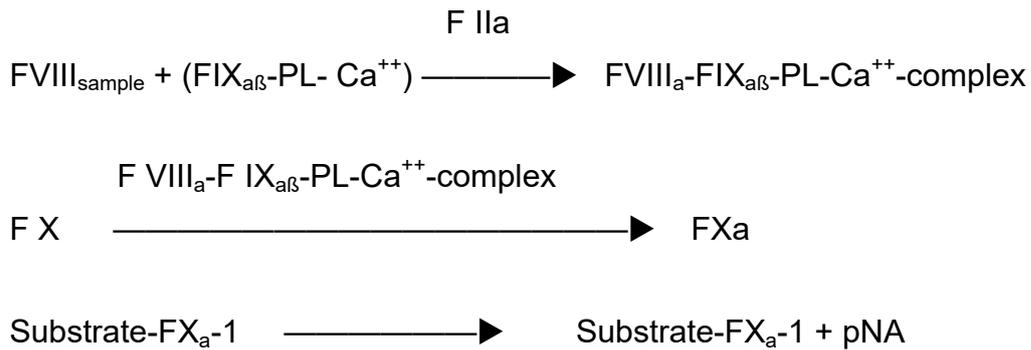
For PT and aPTT reagents as well as calibrator & control material see page 3,4, 6 and 7.

FACTOR ASSAYS

Chromogenic FVIII

The **Technochrom FVIII:C** is a kit for the determination of coagulation factor VIII activity in plasma and factor VIII concentrates by measuring factor Xa generation with a chromogenic substrate. The kit shows an excellent correlation with one and two stage Factor VIII assays and a linear calibration curve between 0 and 130%. It contains all components and is insensitive to heparin up to 10 IU/mL.

Test Principle:

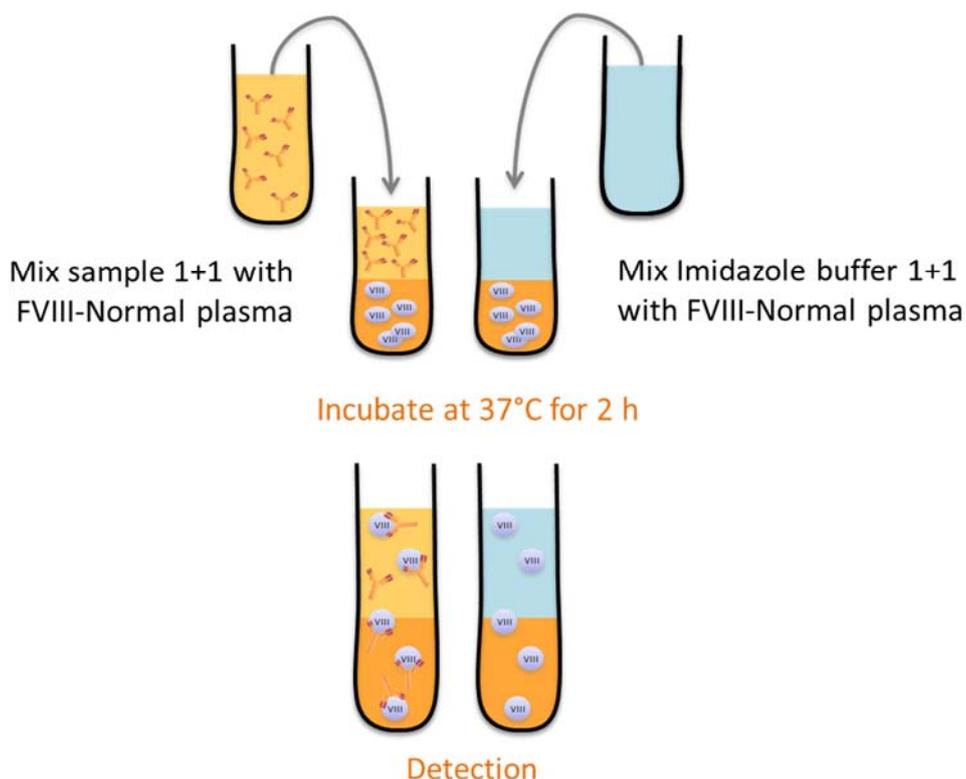


Product	Description	REF	Package
Technochrom FVIII:C	Chromogenic Factor VIII Test kit for the quantitative Factor VIII determination in human citrated plasma or plasma derivatives, including calibration material.	5344101	2 x 2 mL
Technochrom FVIII:C for Ceveron alpha / Ceveron 100 Series	Chromogenic Factor VIII Test kit for the quantitative Factor VIII determination in human citrated plasma or plasma derivatives, including calibration material. To be used on Ceveron alpha and Ceveron 100 Series instruments.	5344103	~ 80 tests

FACTOR ASSAYS

Factor VIII Inhibitor Assay (Bethesda Units)

The **Factor VIII INH Kit** is a kit for the determination of Factor VIII Inhibitor according to Bethesda with improved specificity in the lower range of Ab detection due to dilution with buffered normal FVIII plasma (1 I.U.FVIII/mL). The kit contains a Factor VIII Inhibitor Plasma as positive control and a Factor VIII Inhibitor free plasma as negative control. Results can be calculated directly with the free excel based calculation software available on the website www.technoclone.com.



A Demonstration video is available on our Technozoom YouTube Channel (QR-Code).



Product	Description	REF	Package
FVIII INH Kit native	Bethesda type Factor VIII inhibitor kit. Including normal plasma, native Factor VIII inhibitor plasma, inhibitor free plasma and imidazole buffer.	5152005	~ 2-4 tests
FVIII INH Kit	Bethesda type Factor VIII inhibitor kit. Including normal Plasma, HCV neg. Factor VIII inhibitor plasma inhibitor free plasma and imidazole buffer.	5152009	~ 2-4 tests
Controls			
FVIII INH CON native	Native Factor VIII Inhibitor plasma for control of FVIII Inhibitor determination.	5159008	5 x 1 mL
FVIII INH CON	Factor VIII Inhibitor plasma for control of FVIII Inhibitor determination.	5159010	5 x 1 mL

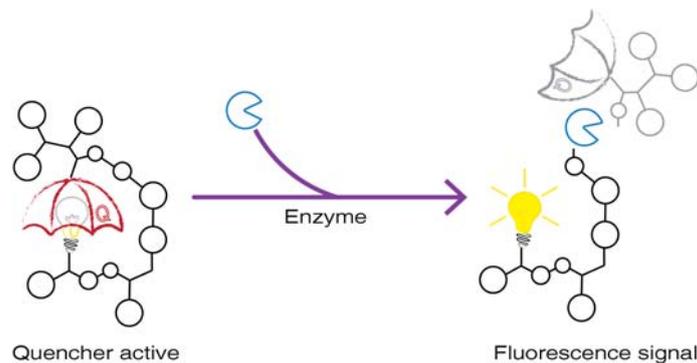
FACTOR ASSAYS

Factor XIII

Factor XIII or **fibrin stabilizing factor** is an enzyme of the blood coagulation system that cross-links fibrin. Factor XIII is a transglutaminase that circulates in the plasma as a heterotetramer of two catalytic A subunits and two carrier B subunits.

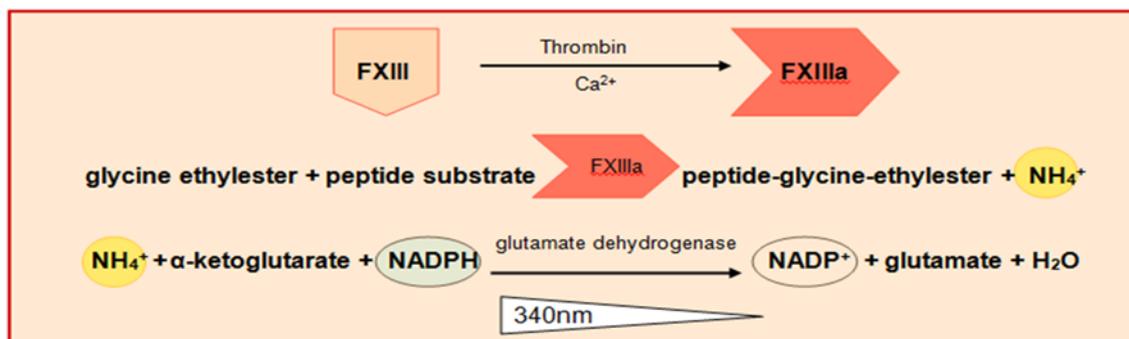
Technofluor FXIII:Act

In the Technofluor FXIII Activity test the quenching method employs a molecule that is bound to a peptide which is cleaved by FXIIIa. Subsequently, the fluorescence of this quenching molecule increases and can be monitored using the Ceveron s100 analyzer.



Technochrom FXIII:Act

Enzymatic reagent kit for the determination of FXIII activity to detect inherited or acquired FXIII deficiencies, abnormal FXIII with decreased activity and elevated FXIII level.



Product	Description	REF	Package
Technofluor FXIII Act	Quenching technology based Factor XIII reagent kit for the determination of Factor XIII Activity in human citrated plasma on the Ceveron s100.	5800200	~ 50 tests
Technochrom FXIII Act	Chromogenic Factor XIII reagent kit for the determination of Factor XIII Activity in human citrated plasma using a wavelength of 340 nm.	5360010	3 x 3 mL
Factor XIII DP	Lyophilized Factor XIII deficient plasma, immunodepleted.	5194104	5 x 1 mL

FACTOR ASSAYS

von Willebrand Factor (VWF)

There are 3 main types of von Willebrand Disease (VWD)

- partially reduced levels of VWF (type 1)
- almost completely reduced levels of VWF (type 3)
- defects in the VWF molecule (type 2)

For Diagnosis of von Willebrand disease a combination of two types of methods (VWF:Antigen and VWF:Function) is used:

VWF: Antigen

ELISA

Latex Assay

VWF: Function

Ristocetin Cofactor Test

Collagen Binding ELISA (CBA)

Latex Assay

Product	Description	REF	Package
Technozym vWF:Ag	Chromogenic vWF:Ag ELISA Test kit for the determination of VWF Antigen in human citrated plasma. Including all required calibrator and control material.	5450201	96 tests
Technozym vWF:CBA (III)	Chromogenic vWF:CBA ELISA Test kit for the determination of the VWF Collagen Binding Activity in human citrated plasma. Including all required calibrator and control material. Test wells are coated with CBA Type III	5450301	96 tests
Technozym vWF:CBA (I)	Chromogenic vWF:CBA ELISA Test kit for the determination of the VWF Collagen Binding Activity in human citrated plasma. Including all required calibrator and control material. Test wells are coated with CBA Type I.	5450311	96 tests
Technozym vWF:CBA (VI) RUO	Chromogenic vWF:CBA ELISA Test kit for the determination of the VWF Collagen Binding Activity in human citrated plasma. Including all required calibrator and control material. Test wells are coated with CBA Type VI.	5450321	96 tests
Additional Calibrators & Controls			
Technozym vWF:Ag CAL	Additional calibrator set for Technozym vWF:Ag.	5450210	5 x 0.5 mL
Technozym vWF:Ag CON	Additional high and low control for Technozym vWF:Ag.	5450212	2 x 0.5 mL
Technozym vWF:CBA CAL	Additional calibrator set for Technozym vWF:CBA.	5450310	5 x 0.5 mL
Technozym vWF:CBA CON	Additional high and low control for Technozym vWF:CBA.	5450312	2 x 0.5 mL

ADAMTS13

ADAMTS13 (**a** **d**isintegrin **a**nd **m**etalloprotease with **t**hrombo**s**pondin type 1 motif 13) is an enzyme (VWF-cleaving protease or VWF-CP) that specifically cleaves unusually large von Willebrand factor (VWF) multimers, which induce platelet thrombus formation under high shear stress conditions. If the activity of ADAMTS13 is lowered for some reason, unusually large VWF multimers may accumulate within blood causing thrombosis due to platelet aggregation, which in turn may lead to TTP (thrombotic thrombocytopenic purpura).

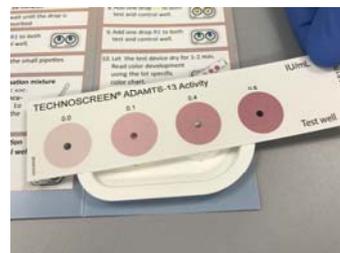
Thrombotic microangiopathy, abbreviated as **TMA**, is a pathologic state which results in thrombosis in capillaries and arterioles, due to an endothelial injury. It may be seen in association with thrombocytopenia, anemia, purpura and renal failure.

The classic TMAs are acquired hemolytic uremic syndrome (aHUS) and thrombotic thrombocytopenic purpura (TTP).

Due to more than 15 years in dedication and experience of ADAMTS13 diagnostics Technoclone offers various solutions in quick, easy and accurate diagnostics of ADAMTS13 depending on your needs.

- **Technoscreen ADAMTS13 Act:**

A quick and easy 24/7 available screening solution without any need of an instrument. For fast and safe patient screening, independent of location and time.



- **Technofluor ADAMTS13 Act:**

Fully automated ADAMTS13 Activity diagnostics, having a lot stable calibration curve, a superior linearity and precision. Generating a result within 30 minutes on Ceveron s100 .

- **Technozym ADAMTS13 Activity ELISA assays:**

State of the art ELISA type assays for determination of ADAMTS13 Activity, Antigen and Inhibitor.

- **Technozym ADAMTS13 Actibind:**

A combined fluorogenic ELISA test kit for the determination of ADAMTS13 Activity and Antigen in one single run.

Fully automated applications for ADAMTS13 ELISA tests and an evaluation software for the fluorogenic test kit can be downloaded from the website www.technoclone.com.

FACTOR ASSAYS

ADAMTS13

The most complete ADAMTS13 Diagnostic Portfolio. ADAMTS13 Activity screening kit, fully automated ready to you use FRETs based reagent kit for Ceveron s100 as well as chromogenic and fluorogenic ELISAs for determination of ADAMTS13 antigen and inhibitor concentration as well as ADAMTS13 activity in human plasma.

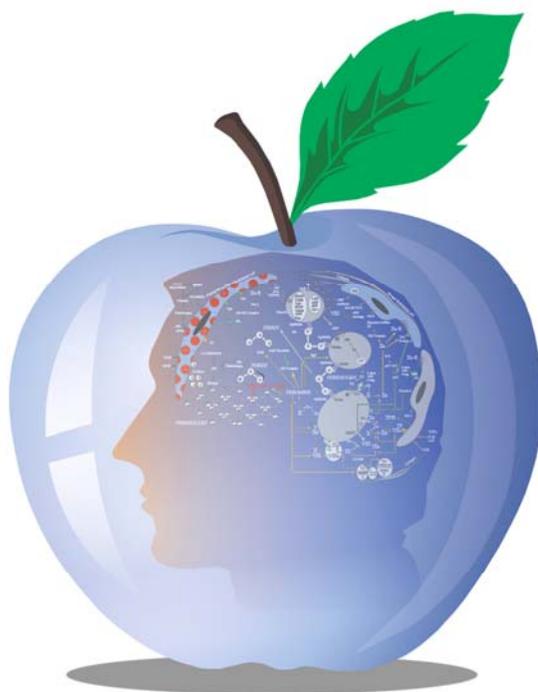
Product	Description	REF	Package
Technoscreen ADAMTS13 Act	ADAMTS13 Activity screening kit including all components. 24/7 instrument independent ADAMTS13 activity screening in human citrated plasma.	5700100	10 tests
Technofluor ADAMTS13 Act	Quenching technology FRETs based ADAMTS13 reagent kit for the fully automated determination of ADAMTS13 Activity in human citrated plasma on the Ceveron s100.	5800100	~ 25 tests
Technozym ADAMTS13 Act	Chromogenic ADAMTS13 ELISA Test kit for the determination of the ADAMTS13 Activity in serum or human citrated plasma. Including all required calibrator and control material.	5450701	96 tests
Technozym ADAMTS13 Ag	Chromogenic ADAMTS13 ELISA Test kit for the determination of the ADAMTS13 Antigen in serum or human citrated plasma. Including all required calibrator and control material.	5450601	96 tests
Technozym ADAMTS13 INH	Chromogenic ADAMTS13 ELISA Test kit for the determination of the ADAMTS13 Inhibitor in serum or human citrated plasma. Including all required calibrator and control material.	5450451 5450401	48 tests 96 tests
Technozym ADAMTS13 Actibind	Fluorogenic combined ADAMTS13 ELISA Test kit for the determination of the ADAMTS13 Activity and the ADAMTS13 Antigen in serum or human citrated plasma. Including all required calibrator and control material.	5450551 5450501	48 tests 2 x 48 tests

FACTOR ASSAYS

ADAMTS13

Additional Calibrators & Controls

Product	Description	REF	Package
Technofluor ADAMTS13 Act 0 CAL	0 Calibrator for calibration of Technofluor ADAMTS13 Act	5800102	2 x 1 mL
Technozym ADAMTS13 Act CAL	Additional calibrator set for Technozym ADAMTS13 Activity	5450761	6 x 0.5 mL
Technozym ADAMTS13 Act CON	Additional high and low control for Technozym ADAMTS13 Activity	5450763	2 x 0.5 mL
Technozym ADAMTS13 Ag CAL	Additional calibrator set for Technozym ADAMTS13 Antigen	5450661	5 x 0.5 mL
Technozym ADAMTS13 Ag CON	Additional high and low control for Technozym ADAMTS13 Antigen	5450663	2 x 0.5 mL
Technozym ADAMTS13 INH CAL	Additional calibrator set for Technozym ADAMTS13 INH	5450461	5 x 0.5 mL
Technozym ADAMTS13 NH CON	Additional high and low control for Technozym ADAMTS13 INH	5450463	2 x 0.5 mL
Technozym ADAMTS13 Actibind CAL	Additional calibrator set for Technozym ADAMTS13 Activity and Antigen	5450561	5 x 0.5 mL
Technozym ADAMTS13 Actibind CON	Additional high and low control for Technozym ADAMTS13 Activity and Antigen	5450563	2 x 0.5 mL



Your partner for ADAMTS13 !

ANTICOAGULANT TREATMENT

Overview

An **anticoagulant** is a substance that prevents coagulation (clotting) of blood. Such substances occur naturally in leeches and blood-sucking insects. Various groups of anticoagulants are available to clinicians for the prevention and treatment of deep vein thrombosis, pulmonary embolism, myocardial infarction and stroke. Anticoagulants reduce blood clotting.

These treatments are characterised by different targets, mechanisms of action, pharmacokinetic profiles and varying pathological states. Their monitoring requires the use of specific assays and calibrators and controls.

ANTICOAGULANT TREATMENT	ASSAYS	Technochrom Anti-Xa	Technoclot DTI
Apixaban			
	Technoview Apixaban	✓	
Argatroban			
	Technoview Argatroban		✓
Arixtra			
	Technoview Arixtra	✓	
Dabigatran			
	Technoview Dabigatran		✓
Edoxaban			
	Technoview Edoxaban	✓	
LMWH (Low Molecular Weight Heparin)			
	Technoview LMWH	✓	
Orgaran			
	Technoview Orgaran	✓	
Rivaroxaban			
	Technoview Rivaroxaban	✓	
UFH (Unfractionated Heparin)			
	Technoview UFH	✓	



I'm not afraid of DOACs!

ANTICOAGULANT TREATMENT

Anti-Xa Assay

Technochrom anti-Xa is a system of reagents for the chromogenic determination of direct and indirect Xa inhibitors in human citrated plasma. The assay is based on the inhibition of activated factor X (FXa) as measured by a chromogenic FXa substrate.



Product	Description	REF	Package
Technochrom anti-Xa	One stage chromogenic anti Xa assay using endogenous patient's antithrombin for the qualitative determination of UFH, LMWH, Heparinoids and DOACs in human citrated plasma.	5340250	~ 80 tests

Calibrators & Controls



The *Technoview Calibrator* and *Control Plasma Sets* listed below are plasmas for calibration and quality control of the corresponding anticoagulant measurement, titrated and optimised using the **Technochrom anti-Xa** test kit.



Product	Description	REF	Package
Technoview Apixaban CAL	Calibrator Set of 5 calibrators (~ 0-500 ng/mL).	5090269	5 x 1 mL
Technoview Apixaban CON L	Low Control (~ 120 ng/mL).	5090271	5 x 1 mL
Technoview Apixaban CON H	High Control (~ 300 ng/mL).	5090270	5 x 1 mL
Technoview Arixtra CAL	Calibrator Set of 5 calibrators (~ 0-2 µg/mL).	5090010	5 x 1 mL
Technoview Arixtra CON L	Low Control (~ 0.5 µg/mL).	5090012	6 x 1 mL
Technoview Arixtra CON H	High Control (~ 1.5 µg/mL).	5090014	6 x 1 mL
Technoview Edoxaban CAL	Calibrator Set of 5 calibrators (~ 0-500 ng/mL).	5090250	5 x 1 mL
Technoview Edoxaban CON L	Low Control (~ 30 ng/mL).	5090251	5 x 1 mL
Technoview Edoxaban CON M	Medium Control (~ 125 ng/mL).	5090252	5 x 1 mL
Technoview Edoxaban CONH	High Control (~ 400 ng/mL).	5090253	5 x 1 mL
Technoview LMW Heparin CAL	Calibrator Set of 5 calibrators (~ 0 -1.8 U/mL).	5090040	5 x 1 mL
Technoview LMW Heparin CON L	Low Control (~ 0.4 U/mL).	5090042	5 x 1 mL
Technoview LMW Heparin CON M	Medium Control (~ 0.9 U/mL).	5090044	5 x 1 mL
Technoview LMW Heparin CON H	High Control (~ 1.3 U/mL).	5090046	5 x 1 mL
Technoview Orgaran CAL	Calibrator Set of 5 calibrators (~ 0-1.6 U/mL).	5090110	5 x 1 mL
Technoview Orgaran CON L	Low Control (~ 0.5 U/mL).	5090112	5 x 1 mL
Technoview Orgaran CON H	High Control (~ 1.0 U/mL).	5090114	5 x 1 mL

ANTICOAGULANT TREATMENTS



Calibrators & Controls

Product	Description	REF	Package
Technoview Rivaroxaban CAL	Calibrator Set of 5 calibrators (~ 0-150 ng/mL).	5090170	5 x 1 mL
Technoview Rivaroxaban CAL H	Calibrator High Set of 5 calibrators (~ 0-500 ng/mL).	5090171	5 x 1 mL
Technoview Rivaroxaban CON L	Low Control (~ 60 ng/mL).	5090172	5 x 1 mL
Technoview Rivaroxaban CON M	Medium Control (~ 120 ng/mL).	5090173	5 x 1 mL
Technoview Rivaroxaban CON H	High Control (~ 300 ng/mL).	5090174	5 x 1 mL
Technoview UFH CAL	Calibrator Set of 5 calibrators (~ 0-1.5 U/mL).	5090070	5 x 1 mL
Technoview UFH CON L	Low Control (~ 0.2 U/mL).	5090072	5 x 1 mL
Technoview UFH CON H	High Control (~ 0.5 U/mL).	5090074	5 x 1 mL

Direct Thrombin Inhibitor (DTI) Assay

Technoclot DTI (direct thrombin inhibitor) is a system of reagents for the clotting determination of direct thrombin inhibitors in plasma.

Product	Description	REF	Package
Technoclot DTI	Dilute thrombin-based method for quantitative determination direct thrombin inhibitors in human citrated plasma.	5100025	~ 40 tests



Calibrators & Controls

The *Technoview Calibrator* and *Control Plasma Sets* listed below are plasmas for calibration and quality control of the corresponding anticoagulant measurement, titrated and optimised using the **Technoclot DTI** test kit.

Product	Description	REF	Package
Technoview Argatroban CAL	Calibrator Set of 5 calibrators (~ 0-2 µg/mL).	5090140	5 x 1 mL
Technoview Argatroban CON L	Low Control (~ 0.7 µg/mL).	5090142	5 x 1 mL
Technoview Argatroban CON H	High Control (~ 1.2 µg/mL).	5090144	5 x 1 mL
Technoview Dabigatran CAL	Calibrator Set of 4 calibrators (~ 50-500 ng/mL).	5090210	4 x 1 mL
Technoview Dabigatran CON L	Low Control (~ 150 ng/mL).	5090214	5 x 1 mL
Technoview Dabigatran CON H	High Control (~ 300 ng/mL).	5090212	5 x 1 mL

Vitamin K Antagonist Monitoring (INR)

For PT reagents, calibrator & control material see page 3, 6 and 7.

THROMBOPHILIA

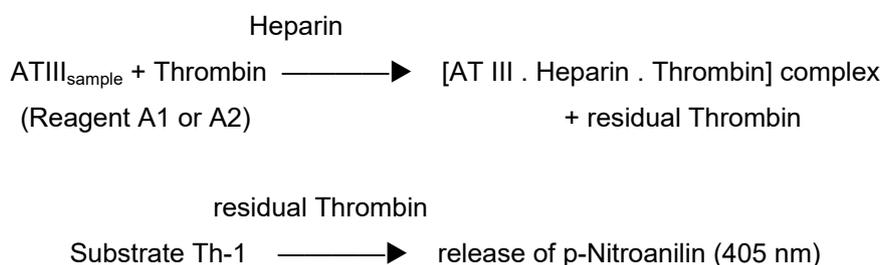
Antithrombin (AT)

Antithrombin (AT, formerly called ATIII, also known as heparin cofactor I) is a natural anticoagulant that inhibits the activated coagulation factors thrombin (FIIa), FXa, and, to a lesser extent, FXIa and FIXa.

Technochrom AT are testkits for the chromogenic and quantitative determination of AT activity in human plasma.

The **TECHNOCHROM AT** and **Technochrom AT manual** are complete reagent kits suitable for the chromogenic determination of AT on analyzers and for the manual method.

Test Principle:



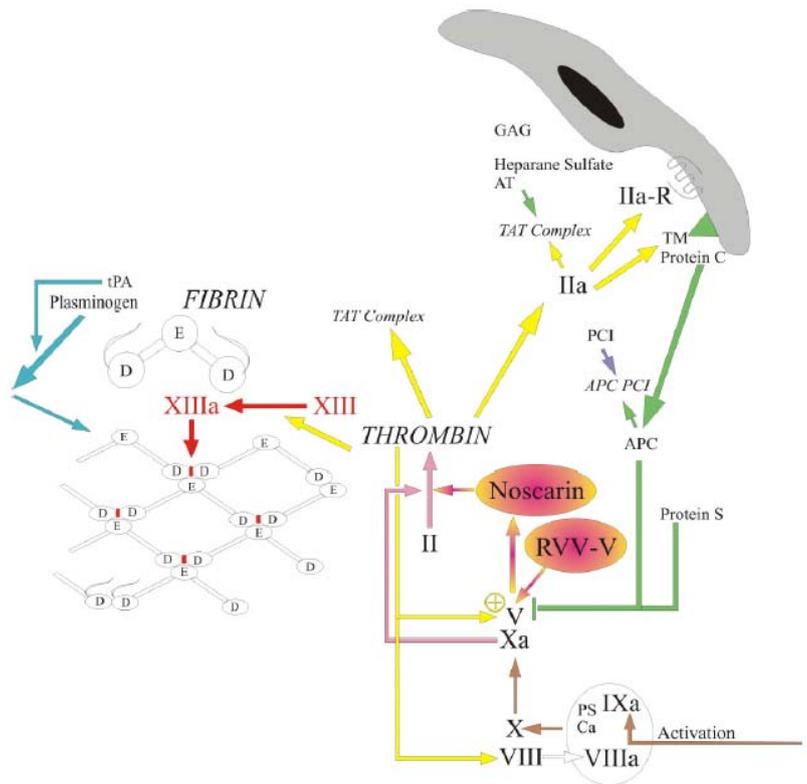
Product	Description	REF	Package
Technochrom AT	Chromogenic test kit for quantitative determination of AT in human citrated plasma using Ceveron instruments.	5340224	~ 100 tests
Technochrom AT manual	Chromogenic test kit for quantitative determination of AT in human citrated plasma.	5340225	~ 40 tests

THROMBOPHILIA

Activated Protein C (APC)

Activated protein C (APC) is a potent natural anticoagulant that acts by cleaving and thus inactivating the activated forms of FV and FVIII (factors Va and VIIIa). Factor V Leiden results from a point mutation that causes an amino acid change (an arginine to glutamine substitution) at position 506 in factor V. This abolishes a cleavage site of APC, making the molecule less susceptible to inactivation.

Based on the observation that the anticoagulant activity of APC was reduced in a modified activated partial thromboplastin time (aPTT) assay, this defect was initially termed "APC resistance."



In contrast to traditional APC Resistance Test the **APC-R Kit** from Technoclone acts on the prothrombinase complex level. Its reliability is enhanced by the elimination of possible preceding interferences by factors upstream within the coagulation cascade and due to its independence from Ca^{++} .

Coagulation is triggered by the addition of a FV dependent prothrombin activator from snake venom „Noscarin“ from Notechis scutatus scutatus in the absence of calcium. The time required for clot information is recorded.

Product	Description	REF	Package
APC-R Kit	A plasma based functional assay for the determination of resistance to activated protein C, caused by the Factor V Leiden mutation (FV:Q506) in human citrated plasma .	5344510	~ 120 tests
APC-R CON	Set of negative and heterozygous control plasma.	5344512	2 x 1 mL

THROMBOPHILIA

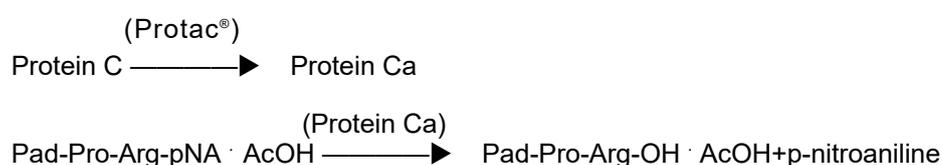
Protein C (PC)

Protein C is a vitamin K dependent serine protease which, when activated, inhibits coagulation by inactivating the clotting factors V/Va and VIII/VIIIa. Additionally, protein C has been shown to have profibrinolytic activity. Hereditary, heterozygous protein C deficiency has been found to be associated with an increased risk of venous thrombosis and hereditary, homozygous total protein C deficiency has been found in neonates with purpura fulminans. Reduced levels of protein C have been found in association with vitamin K deficiency and during coumarin therapy.

Technochrom Protein C

Is an enzymatic reagent kit for the determination of Protein C (PC) activity.

Test Principle:



Technoclot Protein C

Is a reagent kit for the clotting determination of Protein C activity.

Technozym Protein C

The Technozym Protein C allows the determination of Protein C antigen plasma levels in patients with thrombotic tendencies. The assay is a double polyclonal Ab “sandwich” assay.

Product	Description	REF	Package
Technochrom Protein C	Chromogenic test kit for quantitative determination of Protein C in human citrated plasma.	5341013	~ 30 tests
Technoclot Protein C	Clotting test kit for quantitative determination of Protein C in human citrated plasma.	5346200	~ 20 tests
Technozym Protein C:Ag	Chromogenic Protein C ELISA Test kit for the determination of Protein C in human citrated plasma. Including all required calibrator and control material.	TC12021	96 tests

THROMBOPHILIA

Protein S

Protein S (S for Seattle) is a vitamin K-dependent plasma glycoprotein synthesized in the endothelium. In the circulation, Protein S exists in two forms: a free form and a complex form bound to complement protein C4b-binding protein (C4BP). The best characterized function of Protein S is its role in the anti coagulation pathway, where it functions as a cofactor to Protein C in the inactivation of Factors Va and VIIIa. Only the free form has cofactor activity.

Technoclot Protein S is a reagent kit for the quantitative determination of protein S activity in human plasma to detect inherited or acquired protein S deficiencies.

Product	Description	REF	Package
Technoclot Protein S	Test kit for the quantitative determination of protein S activity in human citrated plasma.	5341030	~ 40 tests
Protein S DP	Lyophilized PS deficient plasma, Immunodepleted.	5341031	2 x 1 mL
Technoclot Protein S 0 CAL	0 Calibrator for calibration of Technoclot Protein S.	5800202	2 x 1 mL

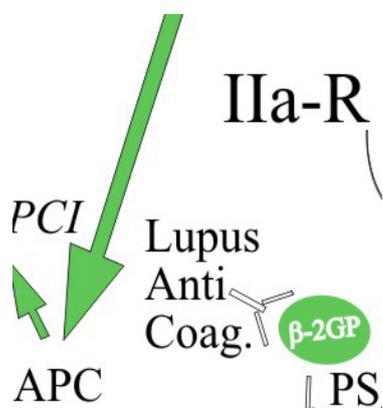
C1-Inhibitor

C1-Inhibitor (C1-INH, C1 esterase inhibitor) is a protease inhibitor belonging to the serpin superfamily. Its main function is the inhibition of the complement system to prevent spontaneous activation. C1-inhibitor is an acute-phase protein that circulates in blood at levels of around 0.25 g/L. The levels rise ~2-fold during inflammation. Although named after its complement inhibitory activity, C1-inhibitor also inhibits proteases of the fibrinolytic, clotting, and kinin pathways. C1-inhibitor is the most important physiological inhibitor of plasma kallikrein, FXIa, and FXIIa.

Technochrom C1-Inhibitor is a reagent kit for the chromogenic determination of C1 esterase inhibitor (C1-INH). Defect in the synthesis of C1-INH leads to hereditary angioedema.

Product	Description	REF	Package
Technochrom C1-INH	Chromogenic test kit for quantitative determination of C1 esterase inhibitor in human citrated plasma. Including all required calibrator and control material.	5345003	~ 100 tests

Lupus Anticoagulant (LA)



Lupus Anticoagulant (also known as lupus Ab, LA, or lupus inhibitors) is an immunoglobulin that binds to phospholipids and proteins associated with the cell membrane. Lupus anticoagulant is a misnomer as it is actually a prothrombotic agent.

Lupus Anticoagulants are considered to be a significant cause of recurrent miscarriages and life threatening venous clots.

Lupus Anticoagulants are phospholipid “interfering” antibodies, which prolong clotting tests that are responsive to procoagulant phospholipid concentration such as APTT and dRVVT. Lupus Anticoagulants are not corrected by mixing with normal plasma but may be corrected by the addition of phospholipid.

Technoclot LA Screen and Technoclot LA Confirm are simplified, one-stage Dilute Russel’s Viper Venom Time (dRVVT) tests, comprising a complete screening and confirmatory system for the detection of Lupus Anticoagulant.

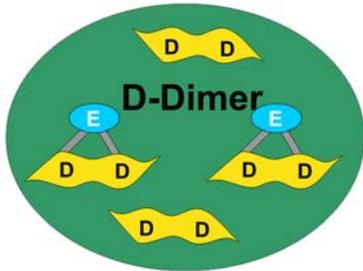
Lupus Anticoagulant Test is a modified activated partial thromboplastin time (aPTT) with an activator of $\text{SiO}_2/\text{Al}_2\text{O}_3$ suspension and two phospholipid concentrations. The modified aPTT’s are performed with normal plasma (free from platelet contamination), with patient plasma and with a mixture of both plasmas. From the shape of the “aPTT against plasma concentration” curve the probability of the presence of lupus inhibitor can be assessed.

Product	Description	REF	Package
Lupus Anticoagulant Test	Test fit for the detection of lupus anticoagulants in human citrated plasma. Activated with $\text{SiO}_2/\text{Al}_2\text{O}_3$ and phospholipids. Including positive control.	5343005	~ 6 tests
Technoclot LA Screen	Simplified screening (one-stage) dilute Russell’s Viper Venom (dRVV) Test for the detection of lupus anticoagulants in human citrated plasma.	5343012	5 x 2 mL
Technoclot LA Confirm	Confirmatory simplified screening (one-stage) dilute Russell’s Viper Venom (dRVV) Test for the detection of lupus anticoagulants in human citrated plasma.	5343016	5 x 1 mL

Controls			
Lupus CON H	Positive Control for determination of Lupus Inhibitor.	5343010 5343019	2 x 1 mL 5 x 1 mL
Lupus CON M	Low Positive Control for determination of Lupus Inhibitor.	5343021	5 x 1 mL
Lupus CON L	Negative Control for determination of Lupus Inhibitor.	5343022	5 x 1 mL

D-Dimer

D-Dimer is formed by Plasmin degradation of Factor XIIIa cross-linked Fibrin. Elevated D-Dimer levels are a key indicator of thrombotic events, indicating excess fibrinolysis, following activation of coagulation.



For exclusion diagnosis of

- ◆ Deep venous thrombosis
- ◆ Pulmonary embolism
- ◆ Disseminated intravascular coagulation
- ◆ Thrombolytic treatment
- ◆ Cancer diagnostics

The **Technoleia D-Dimer Latex Kit** is for the quantitative determination of D-Dimer by “latex enhanced immunoassay”.

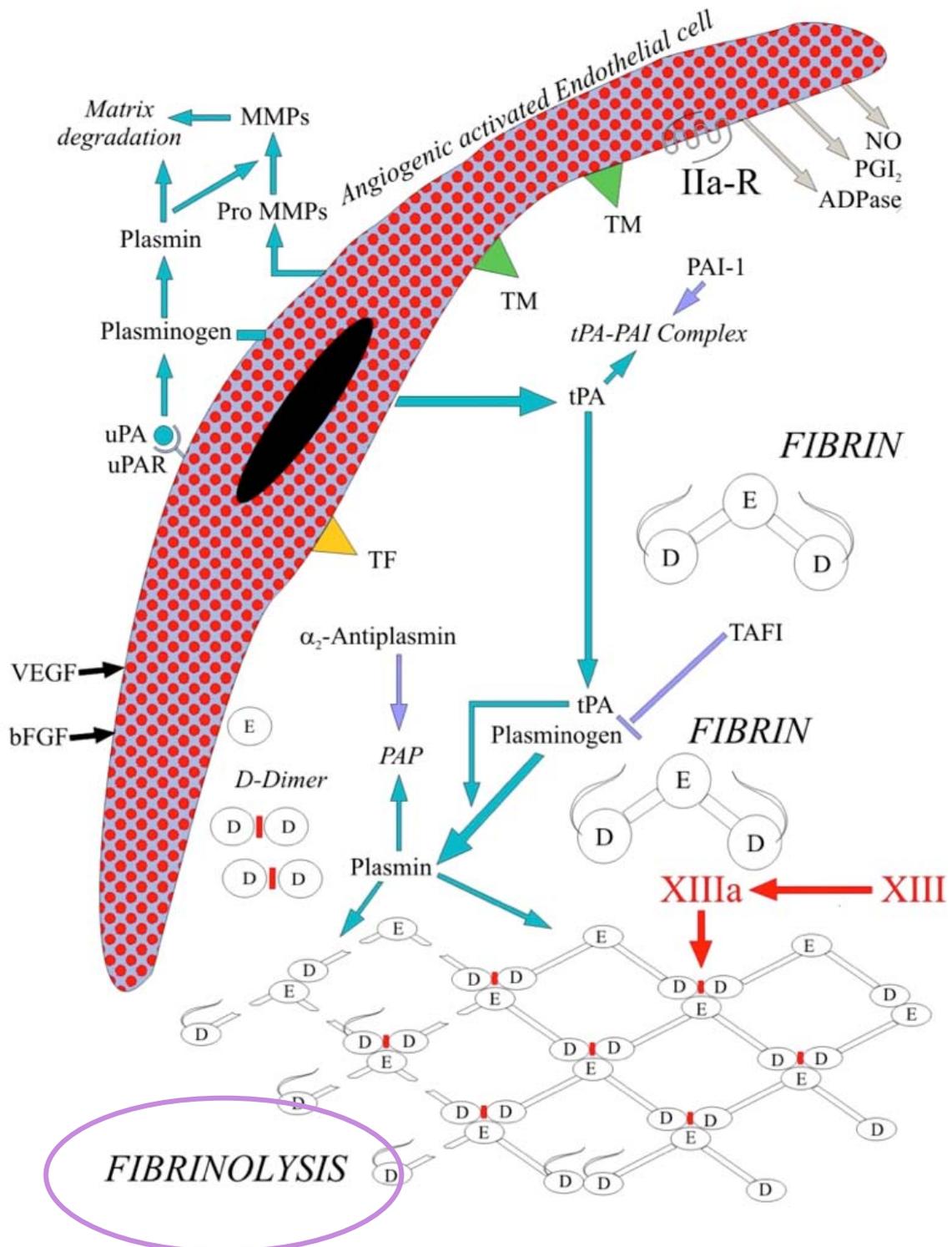
The **Technozym D-Dimer ELISA Kit** is a complete sandwich ELISA for the quantitative determination of D-Dimer in plasma based on monoclonal antibodies.

Product	Description	REF	Package
Technoleia D-Dimer	Latex based test kit for the quantitative determination of D-Dimer in human citrated plasma. Including all required calibrator material	4847210	~ 50 tests
		4847200	~ 150 tests
Technozym D-Dimer	Chromogenic D-Dimer ELISA Test kit for the determination of D-Dimer in serum or human citrated plasma. Including all required calibrator and control material.	2599006	96 tests
Calibrators & Controls			
Technoleia D-Dimer CAL	Calibrator ~ 3000 ng/mL for the determination of D-Dimer.	4847234	2 x 1 mL
Technoleia D-Dimer 0 CAL	Calibrator 0 ng/mL for the determination of D-Dimer.	4847236	2 x 1 mL
Technoleia D-Dimer CON H	High Control Serum (~ 2000 ng/mL) for accuracy and precision control in the determination of D-Dimer.	4847230	5 x 1 mL
Technoleia D-Dimer CON L	Low Control Serum (~ 300 ng/mL) for accuracy and precision control in the determination of D-Dimer.	4847232	5 x 1 mL

FIBRINOLYSIS

Fibrinolysis is a process that prevents blood clots from growing and becoming problematic. In fibrinolysis, a fibrin clot, the product of coagulation, is broken down. Its main enzyme plasmin cuts the fibrin mesh at various places, leading to the production of circulating fragments that are cleared by other proteases or by the kidney and liver.

“Back in 1987 the founding idea of Technoclone was to create a channel through which the latest laboratory research advances in the field of fibrinolysis could be efficiently transferred to the clinical diagnostic setting.”
Technoclone Product Catalog 1989



Tissue-Plasminogen Activator (t-PA)

Tissue-Plasminogen Activator (t-PA) is a protein involved in the breakdown of blood clots. It is a serine protease found on endothelial cells, the cells that line the blood vessels. As an enzyme, it catalyzes the conversion of plasminogen to plasmin, the major enzyme responsible for clot breakdown. Because it works on the clotting system, tPA is used in clinical medicine to treat embolic or thrombotic stroke. Use is contraindicated in hemorrhagic stroke and head trauma.

Technozym t-PA:Ag

A highly sensitive sandwich ELISA for the quantitative determination of t-PA in human plasma. Suitable also for monitoring t-PA levels during thrombolytic therapy. The assay is a sandwich ELISA employing two monoclonal antibodies. The system detects both complexed and uncomplexed t-PA. The detection limit is 1 ng/mL. The assay is standardized against an International standard. Assay time is 2.5 hours. Kit contents include calibrators, high and low controls, coated plate, peroxidase-labeled Ab, buffers and ready to use TMB substrate. The sample buffer contains EDTA for increased recovery of t-PA in normal samples.

Technozym t-PA Actibind

A highly sensitive ELISA system for the combined quantitative determination of antigen concentration and activity of t-PA in human plasma. Technozym t-PA Actibind employs a capture Ab which does not interfere with t-PA functional activity. Following the binding of t-PA contained in the sample by this Ab, t-PA functional activity is determined using chromogenic plasmin substrate. After measuring the functional activity, bound t-PA antigen is detected using a peroxidase-labeled monoclonal anti t-PA Ab which recognizes both complexed and uncomplexed t-PA.

Product	Description	REF	Package
Technozym t-PA Ag EDTA ELISA Kit	Chromogenic t-PA ELISA Test kit for the determination of t-PA in human plasma. Including all required calibrator and control material.	TC12007	96 tests
Technozym t-PA Actibind ELISA Kit RUO	Chromogenic ELISA Test kit for the determination of t-PA functional activity, non-complexed t-PA antigen and t-PA-PAI-1 complexes in human plasma. Including all required calibrator and control material.	TC16000	96 tests
Additional Calibrators & Controls			
Technozym t-PA CAL	Additional 5 calibrators for Technozym t-PA:Ag	TC12001	5 x 0.5 mL
Technozym t-PA CON	Additional high and low control for Technozym t-PA:Ag	TC12003	2 x 0.5 mL

Urokinase-type Plasminogen Activator (u-PA)

Urokinase-type plasminogen activator (uPA), is a serine protease. It was discovered in 1947. Urokinase was originally isolated from human urine, but is present in several physiological locations, such as blood stream and the extracellular matrix. The primary physiological substrate is plasminogen, which is an inactive form (zymogen) of the serine protease plasmin. Activation of plasmin triggers a proteolysis cascade that, depending on the physiological environment, participates in thrombolysis or extracellular matrix degradation. This links urokinase to vascular diseases and cancer. The most important inhibitors of urokinase are the serpins plasminogen activator inhibitor-1 (PAI-1) and plasminogen activator inhibitor-2 (PAI-2), which inhibit the protease activity irreversibly. In the extracellular matrix, urokinase is tethered to the cell membrane by its interaction to the urokinase receptor.

Technozym u-PA:Ag

A highly sensitive sandwich ELISA for the quantitative determination of u-PA in human plasma and tissue extracts. The u-PA:Ag is based on a monoclonal Ab used as a catching Ab and a second monoclonal peroxidase-labeled detecting Ab. Double and single chain urokinase can be detected.

Technozym u-PA:Actibind:

An ELISA for the combined quantitative determination of concentration and activity of u-PA in human plasma. Technozym u-PA:Actibind is based on a catching Ab which does not interfere with the functional activity of u-PA. Following the binding of u-PA in the sample by the Ab, functional activity of bound u-PA is determined using chromogenic plasmin substrate. After measuring the functional activity, this determination system is washed away and bound u-PA antigen is detected using a peroxidase-labeled monoclonal anti u-PA Ab which recognizes both free u-PA and u-PA inhibitor complexes.

Product	Description	REF	Package
Technozym u-PA ELISA Kit RUO	Chromogenic u-PA ELISA Test kit for the determination of u-PA in serum or human citrated plasma. Including all required calibrator and control material.	TC12010	96 tests
Technozym u-PA Actibind ELISA Kit RUO	Chromogenic ELISA Test kit for the determination of u-PA functional activity, non-complexed u-PA antigen and u-PA-inhibitor complexes in human EDTA plasma. Including all required calibrator and control material.	TC16010	96 tests

Plasminogen Activator Inhibitor-Type-1 (PAI-1)

Plasminogen Activator Inhibitor-Type-1 (PAI-1) also known as endothelial plasminogen activator inhibitor or serpin E1 is a protein that in humans is encoded by the *SERPINE1* gene. PAI-1 is a serine protease inhibitor (serpin) that functions as the main inhibitor of the plasminogen activators t-PA and u-PA (urokinase) and hence is an inhibitor of fibrinolysis, the physiological process that degrades blood clots.

Technozym PAI-1:Ag

The assay is a double sandwich ELISA employing two monoclonal antibodies. The system detects active PAI-1, latent and t-PA - PAI-1 complexes. The detection limit is 0.5 ng/mL. Assay time is 2.5 hours.

Technozym PAI-1:Actibind

A highly sensitive ELISA System for the quantitative determination of active PAI-1 antigen in human plasma. The kit allows determination of active PAI-1 antigen in plasma of patients also with disseminated intravascular coagulation and in atherosclerotic disease. The Kit is based on the immobilization of functionally active t-PA to plates by means of a monoclonal Ab. PAI-1 contained in the test samples binds to t-PA and is then quantified using a peroxidase-labeled monoclonal anti-PAI-1 Ab. The assay recognizes PAI-1 active form with no interference of PAI-2 (5 U/mL) and PAI-3 (5.5 µg/mL). Assay time is only 60 minutes.

Product	Description	REF	Package
Technozym PAI-1 ELISA Kit	Chromogenic PAI-1 ELISA Test kit for the determination of PAI-1 in human plasma including all required calibrator and control material.	TC12075	96 tests
Technozym PAI-1 Actibind ELISA Kit	Chromogenic PAI-1 ELISA Test kit for the determination of free active PAI-1 in human plasma including all required calibrator and control material.	TC16075	96 tests
Additional Calibrators & Controls			
Technozym PAI-1 CAL	Additional 5 calibrators for Technozym PAI-1	TC12077	5 x 0.5 mL
Technozym PAI-1 CON	Additional high and low control for Technozym PAI-1	TC12079	2 x 0.5 mL
Technozym PAI-1 Actibind CAL	Additional 5 calibrators for Technozym PAI-1 Actibind	TC16077	5 x 0.5 mL
Technozym PAI-1 Actibind CON	Additional high and low control for Technozym PAI-1 Actibind	TC16079	2 x 0.5 mL

FIBRINOLYSIS

t-PA-PAI-1 Complex

To understand how fibrinolysis is regulated, in general and in individual patients, we need to know the circulating in vivo concentration of active t-PA, active PAI-1, and **t-PA-PAI-1 Complex**. Knowing the concentrations of both t-PA-PAI-1 complex and active PAI-1 is crucial to understanding how the level of active t-PA is being controlled.

Technozym t-PA - PAI-1 Complex

For determination of t-PA-PAI-1 complexes in plasma. The kit is based on a monoclonal Ab directed against t-PA as a catching Ab for t-PA - PAI-1 complexes and a peroxidase-labeled monoclonal anti-PAI-1 Ab used for the detection of bound t-PA - PAI-1 complexes.

Product	Description	REF	Package
Technozym t-PA - PAI-1 Complex RUO	Chromogenic t-PA-PAI-1 ELISA Test kit for the determination of t-PA-PAI-1 Complex in human EDTA plasma. Including all required calibrator and control material.	TC12080	96 tests

Glu-Plasminogen

Plasminogen (Plg) is synthesized in the liver and circulates in two forms: **Glu-Plasminogen** and Lys-Plasminogen. In its native form Plasminogen contains a glutamic acid residue at the N-terminus and this molecule is termed Glu-Plasminogen.

Technozym Glu-Plasminogen:Ag

A highly sensitive complete sandwich ELISA for the selective determination of Glu-Plasminogen in human plasma. The Kit is based on two monoclonal antibodies; a catching Ab and a detecting Ab specific for the Glu-form of Plasminogen.

Product	Description	REF	Package
Technozym Glu-Plasminogen ELISA RUO	Chromogenic Glu-Plasminogen ELISA Test kit for the determination of Glu-Plasminogen in human EDTA plasma. Including all required calibrator and control material.	TC12040	96 tests

Plasmin-Alpha-2-Antiplasmin (PAP) Complex

Plasmin-Alpha-2-Antiplasmin complex (PAP) is an index of recent fibrinolytic activity.

Alpha-2-antiplasmin (a-2-antiplasmin = plasmin inhibitor) is a single chain 70 kD plasmin inhibitor which rapidly reacts with plasmin to form the inactive Plasmin-Alpha-2-Antiplasmin complex (PAP). Synthesized by the liver, α_2 -antiplasmin circulates in plasma at a concentration of approximately 1 μM (70 $\mu\text{g/mL}$), with 20% being cross-linked when blood clots. The formation of the PAP complex is a two step process. First, the lysine binding sites of plasmin and the carboxy-terminal region of α_2 -antiplasmin form a reversible complex. In the second step, cleavage of the peptide bond of the inhibitor forms the irreversible complex. α_2 -antiplasmin is consumed during thrombolytic therapy. Increased PAP complex formation is accompanied by increased fibrin formation and an increased reactive plasminemia. Accordingly, a correlation between the level of fibrin degradation products (FDP) and the level of PAP complexes exists.

Technozym PAP Complex

For the determination of the concentration of Plasmin- α_2 -Antiplasmin complexes in plasma. The Plasmin- α_2 -Antiplasmin Complex ELISA Kit is based on a monoclonal capture Ab which is directed against the neoantigenic site on the complex, an epitope only expressed in the complexes themselves. Therefore, this Ab is specific for complexes only and does not recognize free α_2 -antiplasmin or plasminogen. Detection of bound complexes is performed with a second monoclonal peroxidase-labeled Ab recognizing a different epitope on the complex.

Product	Description	REF	Package
Technozym PAP Complex RUO	Chromogenic PAP Complex ELISA Test kit for the determination of PAP complex in human citrated plasma. Including all required calibrator and control material.	TC12060	96 tests

Additional Calibrators & Controls

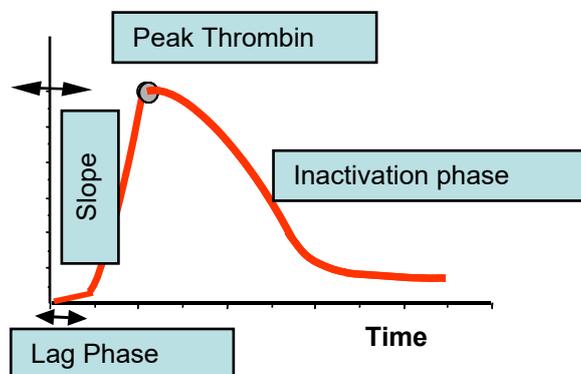
Technozym PAP CAL RUO	Additional 5 calibrators for Technozym PAP Complex ELISA.	TC12062	5 x 0.5 mL
Technozym PAP CON RUO	Additional high and low control for Technozym PAP Complex ELISA.	TC12064	2 x 0.5 mL

Thrombin Generation

Technothrombin TGA for Fluorescence Microplate Readers

Technothrombin TGA is a **Thrombin Generation Assay (TGA)** based on monitoring the formation of thrombin by means of a fluorogenic substrate upon activation of the coagulation cascade by tissue factor. This assay can be used to monitor hemophiliacs during inhibitor bypassing therapy, to monitor anti-coagulation therapy and to determine states of thrombophilia.

The use of **Technothrombin TGA** for such diverse applications is made possible because Technothrombin TGA measures the whole kinetics of thrombin generation not only during the initiation phase of thrombin formation with the end point fibrin formation, but also during the phase of down regulation of thrombin formation and inactivation of the formed thrombin. Technothrombin TGA is therefore an universal tool for the analysis and monitoring of the haemostatic system on an individual basis.



Applications and an evaluation software can be downloaded from the website www.technoclone.com.

Product	Description	REF	Package
Technothrombin TGA RUO	Assay system for the determination of thrombin generation over time in platelet poor or platelet rich human citrated plasma. Calibrator and control material is included in the test kit.	5006010	3 x 16 tests

Modular Reagents

Technothrombin TGA RA RUO	Reagent A (RA); Low concentration of phospholipid micelles without tissue factor.	5006205 5006206	5 x 0.5 mL 50 x 0.5 mL
Technothrombin TGA RB RUO	Reagent B (RB); Low concentration of phospholipid micelles containing pM rhTF.	5006209 5006210	5 x 0.5 mL 50 x 0.5 mL
Technothrombin TGA RC Low RUO	Reagent C Low (RCL); Low concentration of phospholipid micelles and pM rhTF.	5006212 5006213	5 x 0.5 mL 50 x 0.5 mL
Technothrombin TGA RC High RUO	Reagent C High (RCH); High conc. of phospholipid micelles and pM rhTF.	5006214 5006216	5 x 0.5 mL 50 x 0.5 mL
Technothrombin TGA RD RUO	Reagent D (RD); RD conc. of phospholipid micelles.	5006220 5006222	5 x 1.5 mL 50 x 1.5 mL
Technothrombin TGA SUB RUO	Fluorogenic Substrate; 1 mM Z-G-G-R-AMC, 15 mM CaCl ₂ for plasma samples.	5006235 5006230	5 x 1.5 mL 50 x 1.5 mL

Calibrator Set & Controls

Technothrombin TGA CAL	Calibration set for TGA	5006345	1 Set
Technothrombin TGA CON H	TGA High Control. Human plasma with increased thrombin generation	5006320	5 x 1 mL
Technothrombin TGA CON L	TGA Low Control. Human plasma with decreased thrombin generation	5006330	5 x 1 mL

Thrombin Generation

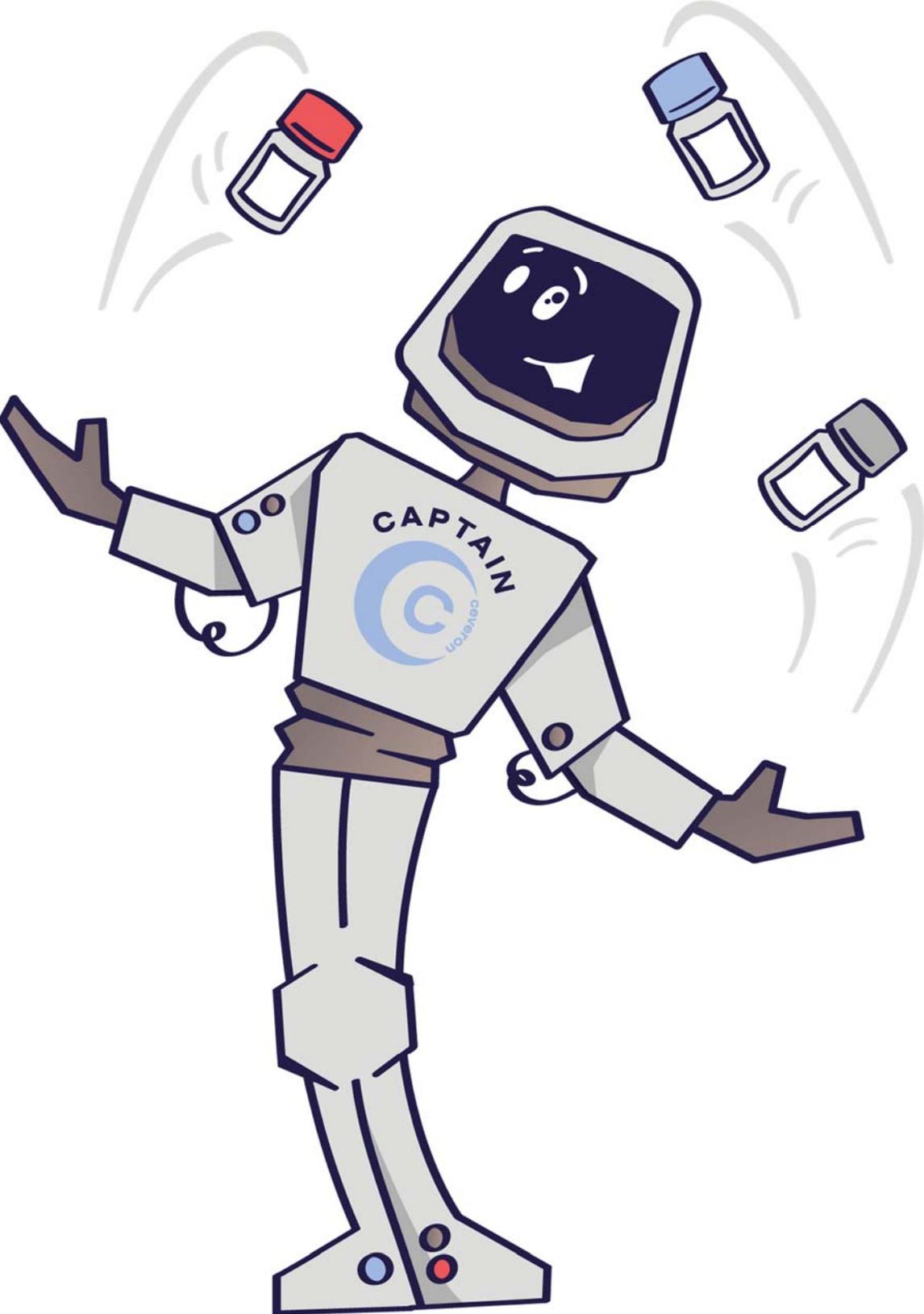
Thrombin Generation for Ceveron t100 / Ceveron s100

Ceveron TGA reagents are optimized Thrombin Generation Reagents for the TGA Module equipped fully automated analyzers **Ceveron t100** and **Ceveron s100**.

- **Easy** as a routine assay
(Measurement from the same patient sample as a routine parameter)
- **Parallel testing** of routine & thrombin generation samples
- **Precise** (intra/inter-assay CV < 5%)
- **Fast** (short assay time of ~20 min for Peak Thrombin)
- Automated **normalisation**
- Up to **36 samples** in a single run

Product	Description	REF	Package
Ceveron TGA RB	<p>For measurement of bleeding tendencies. Low concentration of phospholipid micelles containing low rhTF.</p> <p>Fully automated assay system for the determination of thrombin generation over time in platelet poor or platelet rich human citrated plasma on Ceveron alpha TGA, Ceveron t100 and Ceveron s100. Control material is included in the test kit.</p>	5006011	180 tests
Ceveron TGA RC Low	<p>For measurement of thrombophilic tendencies. Low concentration of phospholipid micelles containing rhTF.</p> <p>Fully automated assay system for the determination of thrombin generation over time in platelet poor or platelet rich human citrated plasma on Ceveron alpha TGA, Ceveron t100 and Ceveron s100. Control material is included in the test kit.</p>	5006013	180 tests
Ceveron TGA RC High	<p>For measurement in anticoagulated patients. High concentration of phospholipid micelles containing rhTF.</p> <p>Fully automated assay system for the determination of thrombin generation over time in platelet poor or platelet rich human citrated plasma on Ceveron alpha TGA, Ceveron t100 and Ceveron s100. Control material is included in the test kit.</p>	5006015	180 tests
Calibrator Set			
Ceveron TGA CAL	<p>Calibration set for TGA on Ceveron alpha TGA, Ceveron t100 and Ceveron s100.</p>	5006347	1 Set

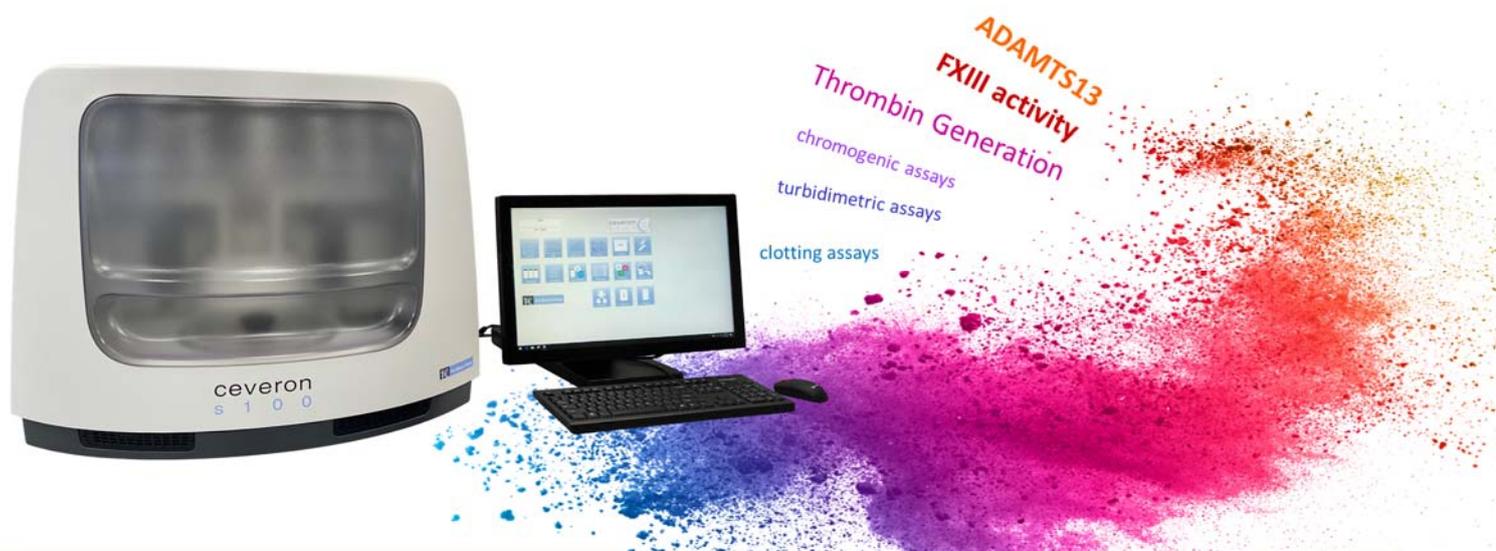
Ceveron 100 Series



Fully automated instruments

Ceveron 100 Series

First fully automated coagulation analyzer series for clotting, chromogenic, turbidimetric assays, thrombin generation and quenching technology (FXIII & ADAMTS13 Activity) !



Product	Description	REF	Package
Ceveron c100	Fully automated coagulation analyzer for clotting, chromogenic and turbidimetric assays	9822010	1 pc.
Ceveron t100	Fully automated coagulation analyzer for clotting, chromogenic, turbidimetric and fluorogenic assays (TGA Module)	9822110	1 pc.
Ceveron s100	Fully automated coagulation analyzer for clotting, chromogenic, turbidimetric fluorogenic and quenching assays (TGA Module and Quenching Module)	9822210	1 pc.

Cuvettes & Stirrers

Magnetic Stirrer Bars	Magnetic Stirrer Bars for Ceveron alpha and Ceveron 100 Series instruments.	9820340	5 pcs.
Cuvette segments	Cuvette segments for Ceveron alpha and Ceveron 100 Series instruments.	9820500 9820510	50 x 12 racks 10 x 50 x 12 racks
Cuvette segments	Cuvette segments for Ceveron 100 Series instruments.	9820501 9820511	50 x 12 racks 10 x 50 x 12 racks
Sample Cups	Sample cups Ceveron alpha and Ceveron 100 Series instruments	9820515 9820520	100 pc. 1000 pc.

For a complete list of spare parts please contact products@technoclone.com

Semi automated instruments

Ceveron m series

The Ceveron m instruments with a unique optical detection principle and in combination with high-level analytical algorithm, measures exact, precise and reproducible results. Operation via intuitive, colored touchscreen, as well as patient result management are perfectly optimized.



* Under development at date of printing

	Ceveron m1	Ceveron m2	Ceveron m4
Wavelength (nm)	620 (red)	405 (UV)	405 (UV)
Optical channel(s)	1	2	4
Pre calibrated tests	Yes	Yes	Yes
Pre warm cuvettes	10	20	20
Sample material	Whole blood Citrate plasma	Citrate plasma	Citrate plasma
Parameters	PT Owren PT, aPTT, FIB, TT, DTI*	PT, aPTT, FIB, TT, AT, anti Xa,* DOACS*	PT, aPTT, FIB, TT, AT, anti Xa,* DOACS*
Display	Colored touch display (4.3" / 109 mm)		
Dimensions	230 x 148 x 94 mm (d x w x h)		

Product	Description	REF	Package
Ceveron m1	Semi-automated coagulation analyzer with one optical channel	9830021	1 pc.
Ceveron m2	Semi-automated coagulation analyzer with two optical channels	9830022	1 pc.
Ceveron m4	Semi-automated coagulation analyzer with four optical channels	9830024	1 pc.
Ceveron DAT Software	Middleware for LIS Connection of Ceveron m	9830040	1 pc.
Accessories			
Reagent Container Ø 22.5 mm	Reagent container for Ceveron m	9830032	100 pcs.
Reagent Tubes Ø 11 mm	Reagent tubes for Ceveron m	9830033	100 pcs.
Cuvettes for Ceveron m	Cuvettes for Ceveron m	9830030	500 pcs.
Hand Scanner for Ceveron m	External Barcode reader for Ceveron m	9830031	1 pc.
Thermal Paper 57 mm wide range	Thermal printer paper for Thermal printer wide range	9830035	5 pcs.
Thermal Printer 57 mm wide range	External thermal printer for Ceveron m	9830034	1 pc.

Semi automated instruments

Ceveron one, four, ten

Ceveron one, four and ten are semi automated coagulation analyzers for measurement of coagulation and fibrinolysis assays, Ceveron four and ten are available optionally with an optical channel for the measurement of chromogenic and turbidimetric assays.



Product	Description	REF	Package
Ceveron one	Semi-automated mechanical instrument with one channel	9830010	1 pc.
Ceveron four	Semi-automated mechanical instrument with four channels	9830012	1 pc.
Ceveron four optical	Semi-automated mechanical instrument with four channels and optical channel	9830014	1 pc.
Ceveron ten	Semi-automated mechanical instrument with ten channels	9830016	1 pc.
Ceveron ten optical	Semi-automated mechanical instrument with ten channels and an optical channel	9830018	1 pc.
Accessories			
3 Volume automatic pipette Merlin	Automatic pipette for filling and dispensing start reagent	9920050	1 pc.
3 Volume automatic pipette Brand	Automatic pipette for filling and dispensing start reagent	9920051	1 pc.
Automatic HandyStep pipette Brand	Automatic pipette HandyStep for dispensing start reagent.	9920052	1 pc.
Printer for Ceveron manual	Printer for Ceveron one, four and ten instruments	9920063	1 pc.
Ball dispenser micro	Ball dispenser micro (only for optical versions)	9920090	1 pc.
Ball dispenser macro	Ball dispenser macro	9920091	1 pc.
Cuvettes macro incl. balls	Cuvettes for Ceveron one, four and ten instruments macro	9920092	1000 pcs.
Cuvettes micro incl. balls	Cuvettes for Ceveron one, four and ten instruments micro (only for optical versions)	9920093	1000 pcs.
Thermal paper 57mm	Thermal paper for use with external Thermal Printer	9920096	5 pcs.

For more information please contact products@technoclone.com

Auxiliary Reagents

Product	Description	REF	Package
CaCl₂ 25 mM	Calcium Chloride solution for determination of aPTT with Dapptin TC, Siron LS, Siron LIS and Technoclot PT Owren.	5277017	1 x 25 mL
		5277020	6 x 25 mL
		5277015	1 x 100 mL
CaCl₂ 50 mM	Calcium Chloride solution for determination of intrinsic coagulation factors with deficient methods.	5279027	1 x 25 mL
		5279025	1 x 100 mL
Citrate Buffer	Dilution buffer for determination of coagulation factors II, V, VII and X with Thromboplastin reagent.	5400047	1 x 25 mL
		5400045	1 x 60 mL
Imidazole Buffer	Dilution buffer for use in factor VIII, IX, XI, XII and factor VIII inhibitor tests, Protein C, Fibrinogen and Technoclot PT Owren.	5410008	1 x 25 mL
		5410007	6 x 25 mL
		5410010	1 x 50 mL
		5410012	1 x 90 mL
NaCl 0.9%	For the use with AT and PC.	4847127	1 x 25 mL
Ceveron alpha System Solution	System Solution for the use with Ceveron alpha .	9820200	1 x 750 mL
Ceveron 100 Series System Solution	System Solution for the use with Ceveron 100 Series.	9820201	1 x 750 mL
Cleaning Solution	Cleaning Solution for the use with Ceveron alpha and Ceveron 100 Series.	9820300	1 x 25 mL
		9820310	6 x 25 mL
Wash Solution	Wash Solution for the use with Ceveron alpha and Ceveron 100 Series.	9820320	1 x 30 mL
		9820328	6 x 30 mL

25 mL and 30 mL bottles are designed for direct use in Ceveron alpha or Ceveron 100 series instruments.

RESEARCH PRODUCTS

Fibronectin

Fibronectin is a high-molecular weight (~440kDa) glycoprotein of the extracellular matrix that binds to membrane-spanning receptor proteins called integrins. Similar to integrins, fibronectin binds extracellular matrix components such as collagen, fibrin, and heparan sulfate proteoglycans (e.g. syndecans).

Technozym Fibronectin:Ag

A highly sensitive complete sandwich ELISA for the selective determination of intact uncleaved fibronectin in human plasma. The Fibronectin ELISA Kit is based on two monoclonal antibodies. One monoclonal Ab is immobilized to microtitre plates for use as a catching Ab; the second peroxidase-labeled monoclonal Ab recognizes exclusively uncleaved fibronectin.

Product	Description	REF	Package
Technozym Fibronectin:Ag RUO	Chromogenic Fibronectin ELISA Test kit for the determination of Fibronectin in human plasma. Including all required calibrator and control material.	TC12030	96 tests
Fibronectin protein	Purified from human plasma, lyophilized.	TC41150	1 mg
Monoclonal anti Fibronectin Ab 2FN	Lyophilized; IgG	TC21223	500 µg
Monoclonal anti Fibronectin Ab 6FN	Lyophilized; IgG	TC21243	500 µg

Vitronectin

Vitronectin is a 75 kDa glycoprotein.

Technozym Vitronectin:Ag

The Vitronectin Antigen ELISA Kit is an Ab “sandwich” system in which one monoclonal Ab functions as the catching Ab and a peroxidase-labeled polyclonal is the detecting Ab.

Product	Description	REF	Package
Technozym Vitronectin:Ag RUO	Chromogenic Vitronectin ELISA Test kit for the determination of Vitronectin in human plasma. Including all required calibrator and control material.	TC12120	96 tests
Vitronectin protein	Purified from human plasma, lyophilized.	TC41140	50 µg
Monoclonal anti Vitronectin Ab 2VN	Lyophilized; IgG	TC21511	500 µg
Polyclonal anti Vitronectin Ab Rabbit	Lyophilized	TC31054	1 mg

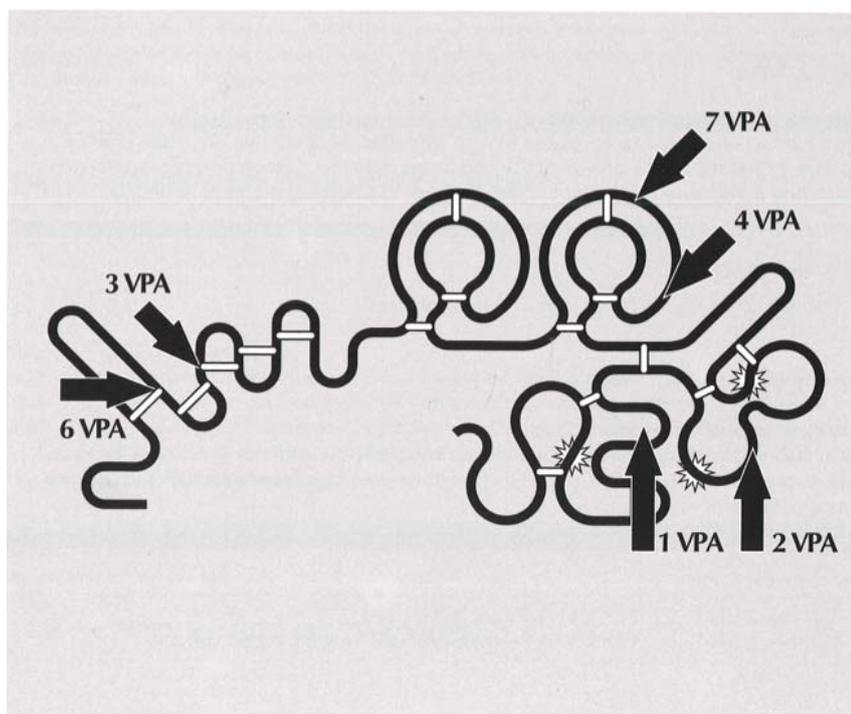
Tissue-type Plasminogen Activator (t-PA)

t-PA is a plasminogen activator produced and released in its single chain form with an apparent molecular weight of 70kD. Single chain t-PA is converted to double chain t-PA by plasmin mediated cleavage of the Arg-278-Ile-279 peptide bond. The resulting 2-chain molecule consists of a light chain (B-chain) containing the catalytic site Ser, His, Arg and a heavy chain (A-chain) containing two kringle-structures, an EGF-domain, and a fibronectin finger domain.

The fibrin specificity of t-PA is mediated by fibrin binding via finger and/or kringle-2-domain, whereby, in latter case, lysine binding sites are involved.

t-PA displays a unique fibrin-specific plasminogen activating function. In the absence of fibrin both single-chain and double-chain t-PA are poor activators of Glu-plasminogen due to a relatively high K_M value and a low K_{cat} value. However, in the presence of physiological concentrations of fibrin the plasminogen activating activity of t-PA is increased 200-400 fold resulting from a decrease in K_M and an increase in K_{cat} values. While both single and double-chain t-PA share similar plasminogen activating properties in physiological systems, double chain t-PA is more active than single-chain t-PA in an amidolytic assay with low molecular weight paranitroanilide substrates as well as in Glu-plasminogen activating assay systems. The two forms also differ in their rates of inactivation by physiological inhibitors: Double-chain t-PA is more easily inactivated by PAI-2 than single-chain t-PA.

t-PA circulates in plasma at a concentration of approximately 5 ng/mL. However, 95% of circulating t-PA is complexed with plasminogen activator inhibitor (PAI-1) and less than 5% circulates in its free form. Upon venous occlusion the concentration of t-PA antigen increases to 10 ng/mL or higher leading to measurable fibrinolytic activity. This is probably due to a combination of increased t-PA release by endothelial cells and a reduction in the t-PA clearance from the occlusion site.



RESEARCH PRODUCTS

Tissue-type Plasminogen Activator (t-PA)

Monoclonal Ab	TC 2VPA	TC 3VPA	TC 7VPA
Class	IgM	IgG ₁	IgG ₁
Epitope	Light-chain	Finger/EGF	K ₂
Half-max. binding (µg/mL)	0.65	8.5	19.0
Influence on cleavage of S-2288	-	-	-
Influence on plasminogen activation in the presence of CNBr fragments of fibrinogen	+	-	-
Inhibition	Non	Competitive	Competitive
K _i (nM)		0.68	0.57

Cadaver vessel perfusate plasminogen activator purified according to the method of Binder et al. (B.R. Binder, J.Spragg, K.F. Austen: *Purification and characterization of human vascular plasminogen activator derived from blood vessel perfusates*. J. Biol. Chem. 1998-2003, 1979).

Product	Description	REF	Package
t-PA purified protein	Recombinant t-PA, lyophilized	TC41072	100 µg
Monoclonal anti t-PA Ab 2VPA	Lyophilized, IgM	TC21013	500 µg
Monoclonal anti t-PA Ab 3VPA	Lyophilized, IgG ₁	TC21023	500 µg
Monoclonal anti t-PA Ab 7VPA	Lyophilized, IgG ₁	TC21053	500 µg
Polyclonal anti t-PA Ab		TC31004	1 mg
Rabbit	Lyophilized	TC31005	5 mg

Plasminogen Activator Inhibitor-Type1 (PAI-1)

PAI-1 is a glycoprotein with an approximate Mr of 50,000, consisting of 379 amino acids, lacking cysteine residues. It is a member of the serine protease inhibitor (Serpin) superfamily with homology to antithrombin III, PAI-2, alpha-2-antiplasmin, C1-inhibitor, and alpha-1-protease inhibitor.

PAI-1 reacts about equally well with single and double chain t-PA, with second order rate constants in the range of 10^7 to 10^8 $M^{-1}s^{-1}$, but not with single chain u-PA. The interaction of PAI-1 and t-PA is reported to be about 5-10-fold slower in the presence of fibrin. The interaction of plasminogen activator with PAI-1 probably results first in the formation of a reversible complex which, in a second step, becomes covalent after the cleavage of the peptide bond Arg 346 - Met 347 has taken place. Finally, a 33 amino acid stretch (Met 347 - Pro 379) is released from the complex reducing the Mr of activator-inhibitor complex by approximately 4.2kD. The plasma concentration of PAI-1 is in the range of 1 nM, but the plasma compartment accounts only for three quarters of the total PAI-1 content in blood. A large amount of PAI-1 is contained in platelets, which upon physiological stimuli, e.g. thrombin, release PAI-1.

Monoclonal Ab	TC 1PAI	TC 3PAI	TC 5PAI
Class	IgG ₂	IgG _{2b}	IgG ₁
Half-max. binding (µg/mL)	1.0	10.0	n.d.
Active PAI-1	+	+	+
Latent PAI-1	+	+	+
t-PA - PAI-1 complexes	+	+	+
PAI-2 and PAI-3	-	-	-
Functional activity of PAI-1	No effect	Interference	interference

Purified plasminogen activator inhibitor 1 from the human melanoma cell line MJZJ according to the method of Wagner et al. (O.F.Wagner, B.R. Binder: *Purification of an active plasminogen activator inhibitor immunologically related to the endothelial type plasminogen inhibitor from conditioned media of a human melanoma cell line*. J. Biol. Chem. 261: 14474-14481, 1986).

Product	Description	REF	Package
PAI-1 protein	Recombinant PAI-1, lyophilized.	TC41069	250 U
		TC41067	500 U
Monoclonal anti PAI-1 Ab 1PAI	Lyophilized, IgG ₂ .	TC21163	500 µg
Monoclonal anti PAI-1 Ab 3PAI	Lyophilized, IgG _{2b} .	TC21173	500 µg
Monoclonal anti PAI-1 Ab 5PAI	Lyophilized, IgG ₁ .	TC21193	500 µg
Polyclonal anti PAI-1 Ab	Lyophilized	TC31024	1 mg
		TC31025	5 mg

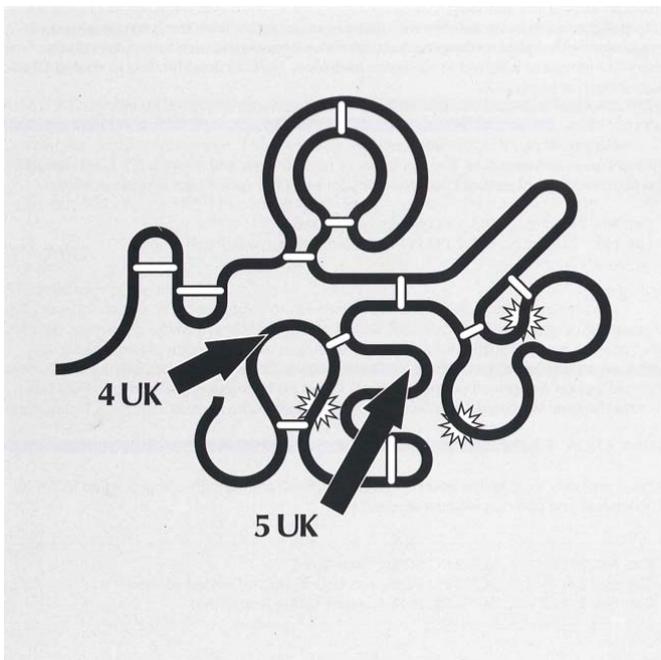
Urokinase-type Plasminogen Activator (u-PA)

u-PA is a 55kD two chain plasminogen activator produced by plasmin or kallikrein cleavage of single-chain precursor molecule scu-PA at the site of the Lys-158 - Ileu159 peptide bond. A single disulphide bond links the two chains of the u-PA molecule: the B-chain contains the catalytic site and the A-chain contains a kringle-domain and a growth factor domain. Thrombin is capable of cleaving scu-PA at position Arg-156 - Phe-157 resulting in an inactive 2-chain u-PA.

Single chain u-PA has some intrinsic activities which represents less than 5% of the activity of 2-chain u-PA. However, scu-PA is capable of activating plasminogen to plasmin, a process which is stimulated in the presence of fibrin and which, especially in vivo, mediates fibrin specific thrombolytic activity.

As compared to tissue-type plasminogen activator which binds to forming fibrin, u-PA binds to specific receptors on several cell types, thereby focusing its plasminogen activating and proteolytic activity on the cell surface.

u-PA circulates in its single chain form in plasma in an average concentration of 1 to 2 ng/mL. Its concentrations is increased in cases of some malignancies, especially those of the urogenital and gastrointestinal tracts.



Monoclonal Ab	TC 4UK	TC 5UK
Class	IgG ₁	IgG ₁
Half-max. binding (µg/mL)	0.56	0.03
Influence on cleavage of S-2444	-	-
Influence on plasminogen inhibition	-	+

Purified human urinary high molecular weight urokinase according to the method of Huber et al. (k. Huber, J. Kircheimer, B.R. Binder: *Characterization of specific anti-human urokinase Ab: development of a sensitive competitive radioummunoassay for urokinase antigen.* J. Lab. Clin. Med. 103: 684-694, 1984).

Product	Description	REF	Package
u-PA purified protein	Purified human, lyophilized	TC42000	125 µg
Monoclonal anti u-PA Ab 4UK	Lyophilized, IgG ₁	TC21063	500 µg
Monoclonal anti u-PA Ab 5UK	Lyophilized, IgG ₁	TC21073	500 µg
Polyclonal anti u-PA Ab Rabbit	Lyophilized	TC31014 TC31015	1 mg 5 mg

RESEARCH PRODUCTS

Single Chain Urokinase Plasminogen Activator (scu-PA)

Urokinase-type plasminogen activator (uPA) is synthesized as single-chain protein (scuPA) with little intrinsic activity. scuPA is activated when it is converted to two-chain urokinase (tcuPA) by plasmin or when it binds as a single-chain molecule to its cellular receptor (uPAR).

Monoclonal Ab	TC 35 scu-PA	TC 14 scu-PA	TC 1 scu-PA	TC PUK
Class	IgG ₁	IgG ₁	IgG ₁	n.d.
Two-chain urokinase	+	+	+	-
Low molecular weight urokinase	+	+	n.d.	-
Inhibition of enzymatic activity	-	Partially	n.d.	-

Product	Description	REF	Package
scu-PA purified protein	from cell culture, frozen	TC41052	100 µg
Monoclonal anti scu-PA Ab 35 scu-PA	Lyophilized, IgG ₁	TC21283	500 µg
Monoclonal anti scu-PA Ab 14 scu-PA	Lyophilized, IgG ₁	TC21293	500 µg
Monoclonal anti scu-PA Ab 1 scu-PA	Lyophilized, IgG ₁	TC21393	500 µg
Monoclonal anti scu-PA Ab PUK	Lyophilized	TC21383	500 µg

CNBr Fibrinogen fragments

Fibrinogen is the main plasma coagulation factor. It exhibits a molecular weight of 340KD and consists of a dimer in which each monomer itself is composed of an alpha-, beta- and gamma-chain, held together by disulfide bridges. Upon thrombin cleavage of the A-alpha- and B-beta-chain, fibrinopeptide A and thereafter fibrinopeptide B moieties are released. Binding sites for C-terminal regions of other fibrinogen or fibrin molecules are generated in the new aminotermus. This allows formation of fibrin polymers which can be crosslinked by fibrin stabilizing factor. Fibrin is highly susceptible to proteolysis by plasmin which initially cleaves the C-terminal part of the alpha-chain generating lysine residues which, in turn, are involved in the binding of kringle structures leading to maximal stimulation of plasminogen activation by tissue plasminogen activator.

The stimulating effect of fibrin on plasminogen activation by t-PA is also mimicked by cyanogen bromide (CNBr) fragments of fibrinogen. Technoclon CNBr-fragments of fibrinogen are obtained by cyanogen bromide digestion of purified human fibrinogen according to the method of Blombäck et al. *N-terminal disulphide knot of human fibrinogen*. Nature 218: 130-134, 1968

Product	Description	REF	Package
CNBr Fibrinogen fragments	Lyophilized	TC41104	1 mg
		TC41105	5 mg

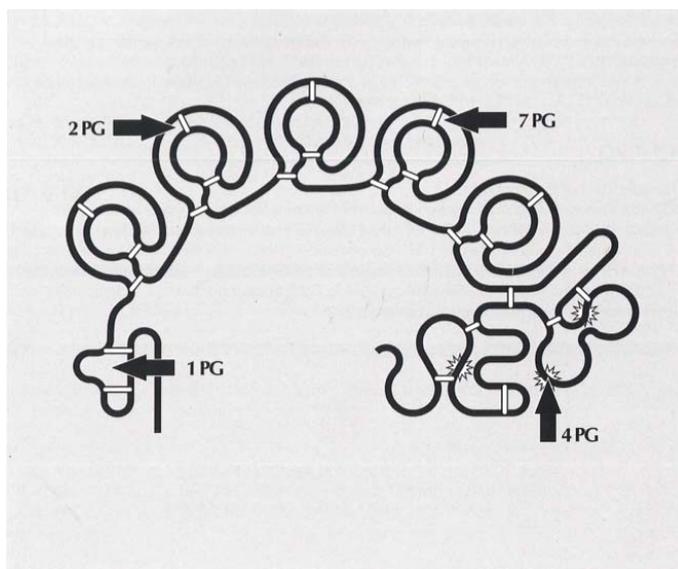
Plasminogen

Plasminogen, the precursor of the serine protease plasmin, is a single chain glycoprotein with a molecular weight of approximately 92kD. Plasminogen activators cleave a single peptide bond in plasminogen between Arg-560 - Val-561 to generate the two-chain molecule plasmin which is a potent proteolytic enzyme with trypsin-like specificity.

The fibrin specificity of the proteolytic action of the active site contained in the B-chain of plasmin is mediated by kringle structures in the A-chain which can bind to lysine residues as they are exposed during fibrin formation. These kringle structures are also responsible for the affinity of plasmin(ogen) to alpha-2-antiplasmin, histidin-rich-glycoprotein and thrombospondin.

Plasminogen circulates in plasma in its native form Glu-plasminogen. The limited proteolytic action of plasmin on Glu-plasminogen cleaves a 76 or 67 amino acid aminoterminal peptide generating Lys- or Arg-plasminogen, respectively. Lys-plasminogen has higher affinity for lysine residues and is more readily activated by plasminogen activator than Glu-plasminogen.

The functional domains of plasminogen are revealed by elastase cleavage of the molecule which result in 3 major fragments: kringle 1-3 fragment, kringle 4 fragment and kringle 5 containing mini-plasminogen.



Monoclonal Ab	TC 1PG	TC 2PG	TC 4PG	TC 7PG
Class	IgG ₁	IgG ₁	IgG ₁	IgG ₁
Binding to plasminogen	Glu-Plg	K ₁₋₃	Mini-Plg	K ₄
Binding to plasmin-alpha-2-antiplasmin complex	+	+	-	+
Half-max. binding (ng/mL)	0.006	0.010	n.d.	n.d.
Inhibition of plasminogen activation	-	-	Competitive K _i =4nM	-
Stimulation of plasminogen activation	+	+	-	+

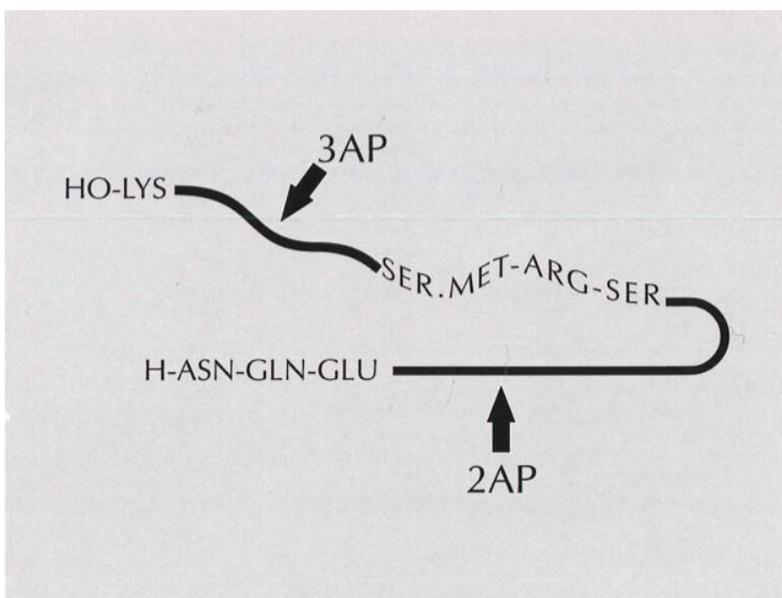
Product	Description	REF	Package
Glu-Plasminogen protein	Purified from human plasma, lyophilized	TC41004	1 mg
		TC41005	5 mg
Lys-Plasminogen protein	Purified from human plasma, lyophilized	TC41014	1 mg
		TC41015	5 mg
Monoclonal anti plasminogen Ab 1PG	Lyophilized, IgG ₁	TC21103	500 µg
Monoclonal anti plasminogen Ab 2PG	Lyophilized, IgG ₁	TC21113	500 µg
Monoclonal anti plasminogen Ab 4PG	Lyophilized, IgG ₁	TC21123	500 µg
Monoclonal anti plasminogen Ab 7PG	Lyophilized, IgG ₁	TC21133	500 µg

Alpha-2-Antiplasmin

Alpha-2-antiplasmin (Plasmin Inhibitor) is a member of the serine protease inhibitor superfamily. It is a single chain glycoprotein with an apparent molecular weight of 70 kD and acts as the primary inhibitor of plasmin in plasma. It inhibits, in a fast reaction, plasmin whereby in a fast phase the C-terminal region of alpha-2-antiplasmin binds reversibly to the lysine-binding site of plasmin and, in a second step, the serine residue of the active site of plasmin reacts with the reactive site Arg-354 - Met-355 of alpha-2-antiplasmin.

Subsequently, an 11kD C-terminal sequence is liberated but remains non-covalently bound to the lysine-binding site 1 of plasmin. Alpha-2-antiplasmin also crosslinks with the alpha-chain of fibrin through a site close to the N-terminus. Therefore, alpha-2-antiplasmin interferes with the fibrin-binding of plasminogen to fibrin but crosslinked alpha-2-antiplasmin enhances indirectly the binding of plasminogen to fibrin.

Alpha-2-antiplasmin circulates in plasma in a concentration of approximately 1 µM equivalent to 70 µg/mL. It is synthesized in the liver and has a biological half-life of 3.3 days. During coagulation approximately 20% of alpha-2-antiplasmin is crosslinked to fibrin.



Monoclonal Ab	TC 2AP	TC 3AP
Class	IgG ₁	IgG ₁
Half-max. binding (µg/mL)	0.009	0.008
Reaction with native alpha-2-antiplasmin	+	+
Reaction with plasmin-alpha-2-antiplasmin complex	+	-

Product	Description	REF	Package
Monoclonal anti α-2-Antiplasmin Ab 2 AP	Lyophilized, IgG ₁	TC21083	500 µg
Monoclonal anti α-2-Antiplasmin Ab 3 AP	Lyophilized, IgG ₁	TC21093	500 µg
Monoclonal anti α-2-Antiplasmin Ab 7 AP	Lyophilized, IgG ₁	TC21263	500 µg
Monoclonal anti α-2-Antiplasmin Ab 14 AP	Lyophilized, IgG _{2a}	TC21265	500 µg

RESEARCH PRODUCTS

Protein C Inhibitor

Protein C Inhibitor (PCI, SERPIN A5) is a serine protease inhibitor (serpin) which limits the expression of protein C (an anticoagulant). An N-terminal fragment of PCI is a possible serum biomarker for prostate cancer.

Technozym Protein C INH:Actibind allows the determination of active Protein C Inhibitor antigen. The assay is based on the immobilization of functionally active urokinase to plates by means of a monoclonal Ab. Protein C Inhibitor contained in the test sample binds to u-PA and is then quantified using a peroxidase-labeled monoclonal anti-Protein C Inhibitor Ab.

Product	Description	REF	Package
Technozym Protein C INH:Actibind RUO	Chromogenic Protein C Inhibitor ELISA Test kit for the determination of PCI in human citrated or EDTA plasma. Including all required calibrator and control material.	TC16100	96 tests
Monoclonal anti Protein C INHAb 4PCI	Lyophilized, IgG ₁	TC21353	500 µg

Peroxidase labeled anti ADAMTS13 Ab

Rabbit raised polyclonal antibodies against full length recombinant human ADAMTS13, recognizing plasma derived human ADAMTS13. Purification with affinity chromatography on Protein G and peroxidase conjugated.

Product	Description	REF	Package
Polyclonal ADAMTS13 Ab Peroxidase conjugated	Rabbit anti human	5450555	1 mL

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Siron LIS 4

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System Solution for Ceveron alpha 40

System Solution for Ceveron 100 Series 40

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