

technoclone



TECHNOZYM[®] ADAMTS-13

Chromogenic and fluorogenic ELISAs for determination of ADAMTS-13 antigen and inhibitor concentration as well as activity in human plasma

A clear view into the future!

TECHNOZYM[®] ADAMTS-13

A disintegrin and metalloprotease with thrombospondin motifs

- ADAMTS-13 is a plasma protein with low concentration (5 nmol/L) which cleaves very specific large vWF multimeres under laminar flow conditions
- A functional defect of ADAMTS-13 leads to presence of higher molecular weight forms of vWF in plasma and thus to increased platelet aggregation

→ **Main cause for thrombotic thrombocytopenic purpura (TTP)**

- Thrombotic microangiopathy (TMA) is a pathologic state which results in thrombosis in capillaries and arterioles, due to an endothelial injury. The classic TMAs are aquired hemolytic uremic syndrome (aHUS) and TTP:

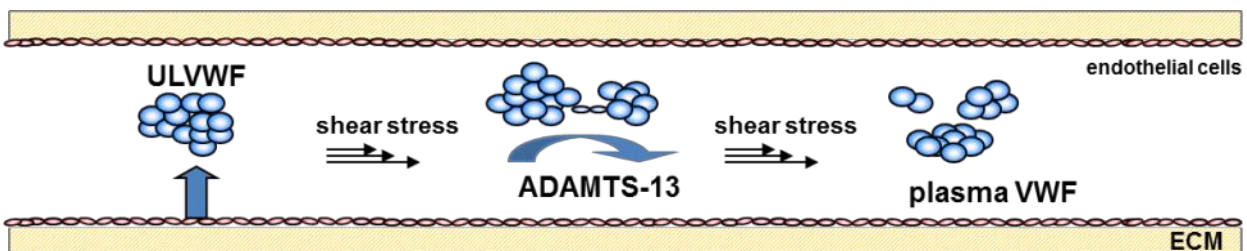
≤ 5 % ADAMTS-Activity ≥ 5 % ADAMTS-Activity
 TTP aHUS

according to Tsai H-M. Int. J. Hematol. 2010;91:1-9

ADAMTS-13 FUNCTION

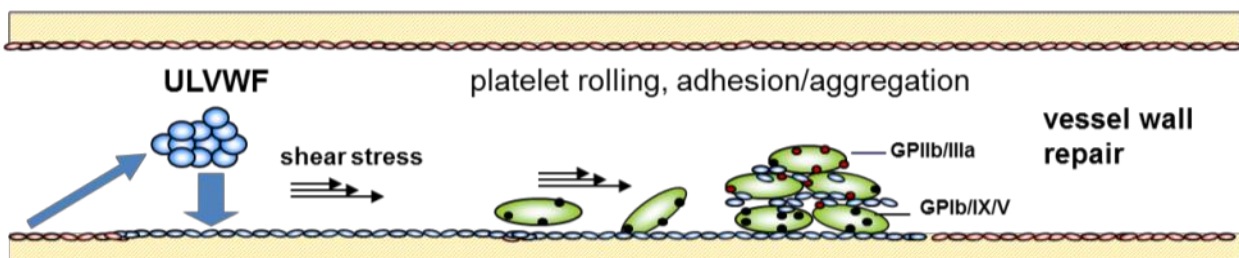
- Intact vessel wall

ADAMTS-13 regulates under normal circumstances the size of vWF multimers



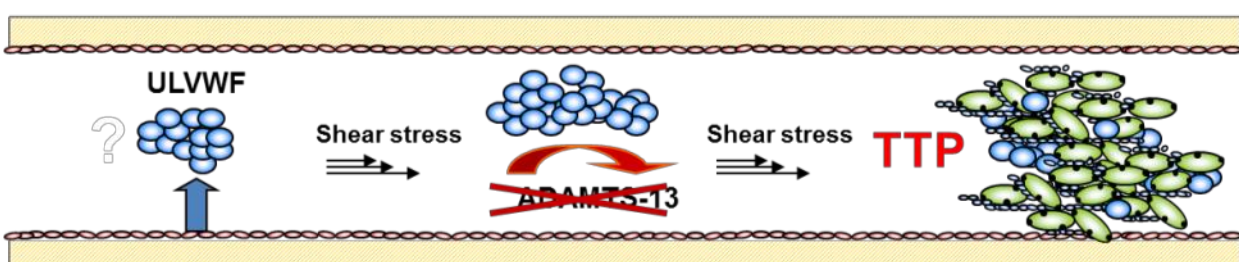
- Injured/inflamed vessel wall

vWF multimers build a connection between collagen and platelets



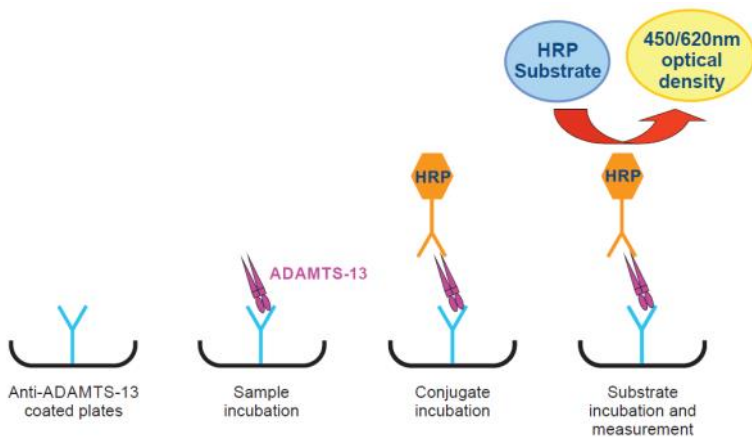
- Absence of ADAMTS-13

Formation of very large vWF multimers leads to platelet aggregation in healthy vessels → TTP



TECHNOZYM[®] ADAMTS-13 ANTIGEN (chromogenic)

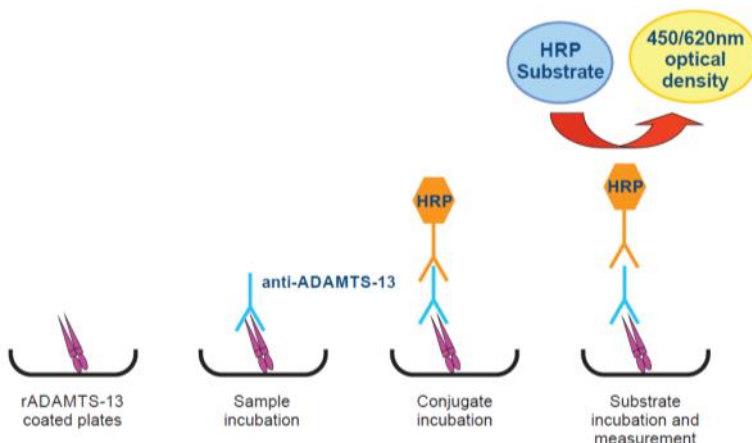
Chromogenic ELISA for determination of ADAMTS-13 antigen concentration



- Detection of low ADAMTS-13 concentrations possible
- Calibrators and controls are calibrated against the **IS for ADAMTS-13**
- Short assay time (~3.5 h)
- Very good dilution linearity
- Detection is independent of enzyme activity

TECHNOZYM[®] ADAMTS-13 INHIBITOR (chromogenic)

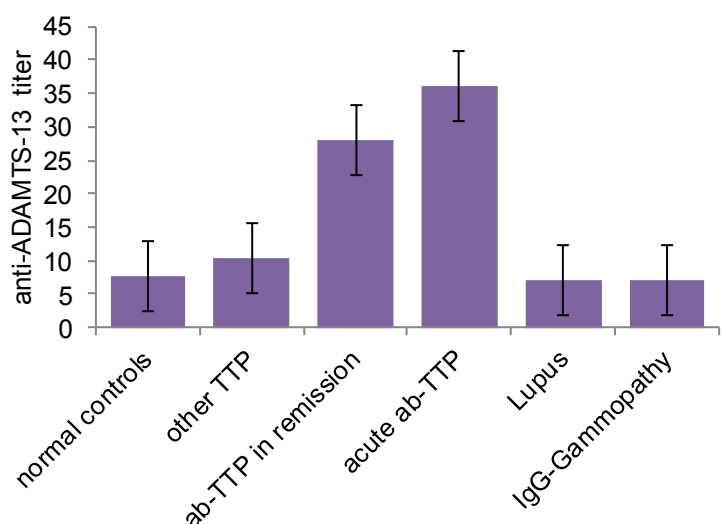
Chromogenic ELISA for determination of antibodies directed against ADAMTS-13



This ELISA is designed for detection of anti-ADAMTS-13 antibodies present in acquired TTP. Quick TTP diagnosis can allow immediate implementation of life saving therapeutic steps.

TECHNOZYM[®] ADAMTS-13 INH ELISA can differentiate between acute TTP caused by anti-ADAMTS-13 antibody and patients who are in remission or have other forms of TTP.

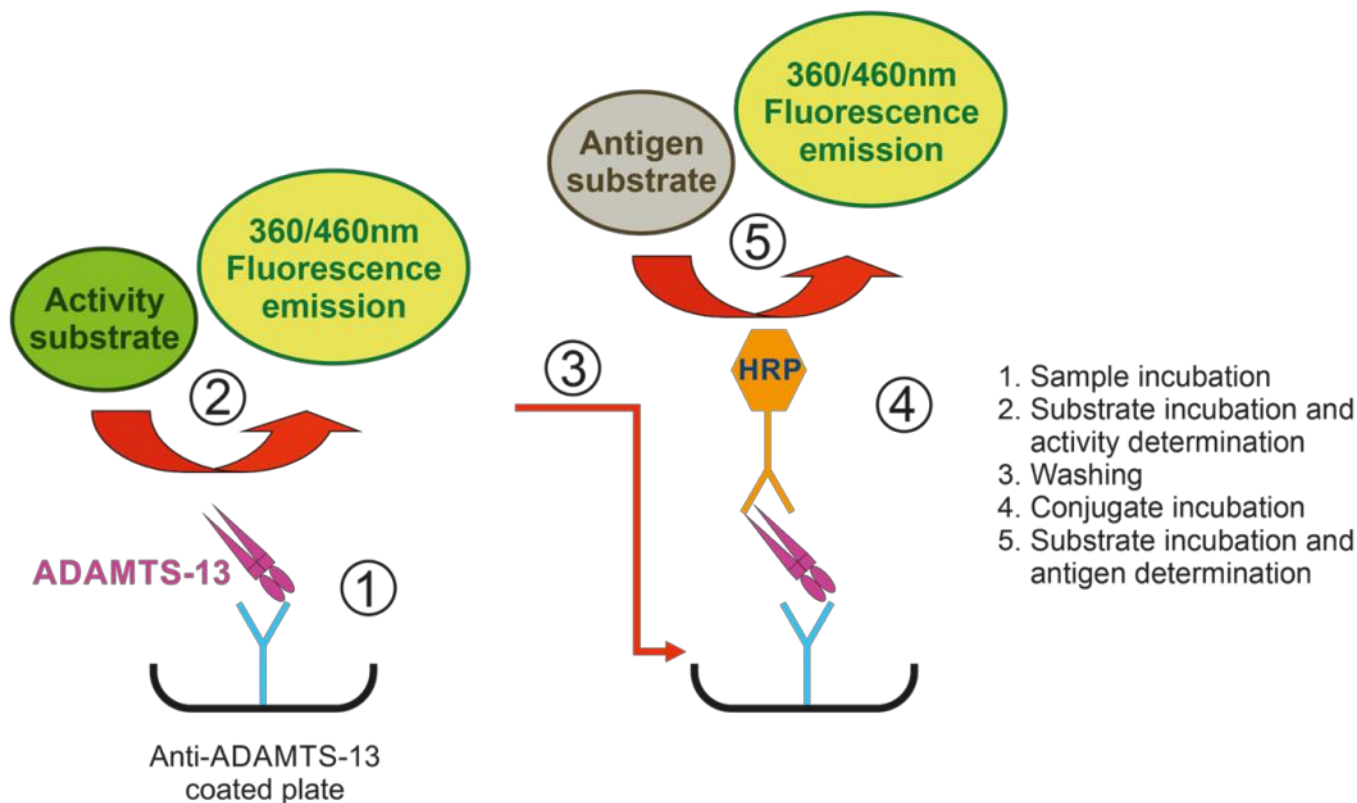
It is highly specific and can clearly differentiate between TTP samples and other samples with auto-antibodies (e.g. Lupus) or high IgG concentration (e.g. IgG Gammopathy)



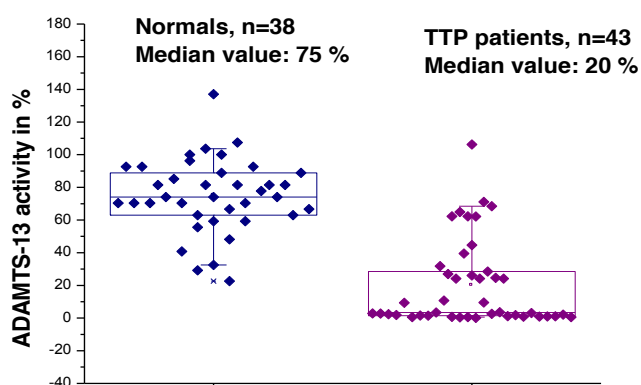
TECHNOZYM[®] ADAMTS-13 (fluorogenic)

Fluorogenic ELISA for the determination of ADAMTS-13 antigen and activity

TEST PRINCIPLE

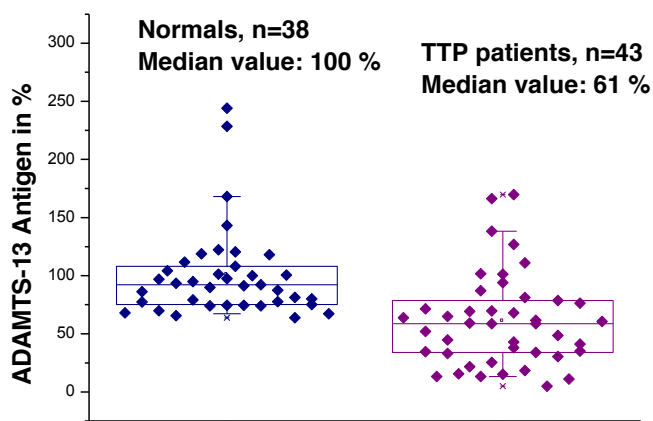


ACTIVITY AND ANTIGEN DETERMINATION



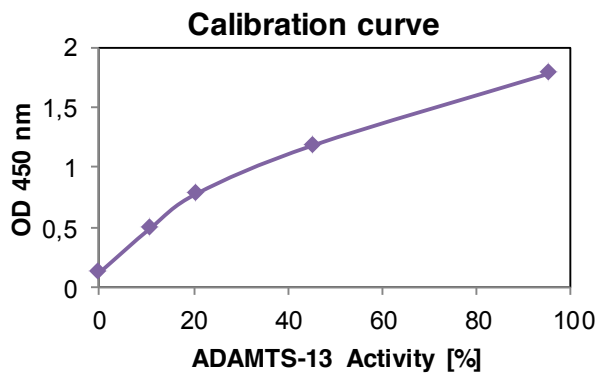
The antigen assay shows a significant difference of ADAMTS-13 antigen concentration between normal and TTP patients.

The activity assay shows a significant difference of ADAMTS-13 activity between normal and TTP patients.



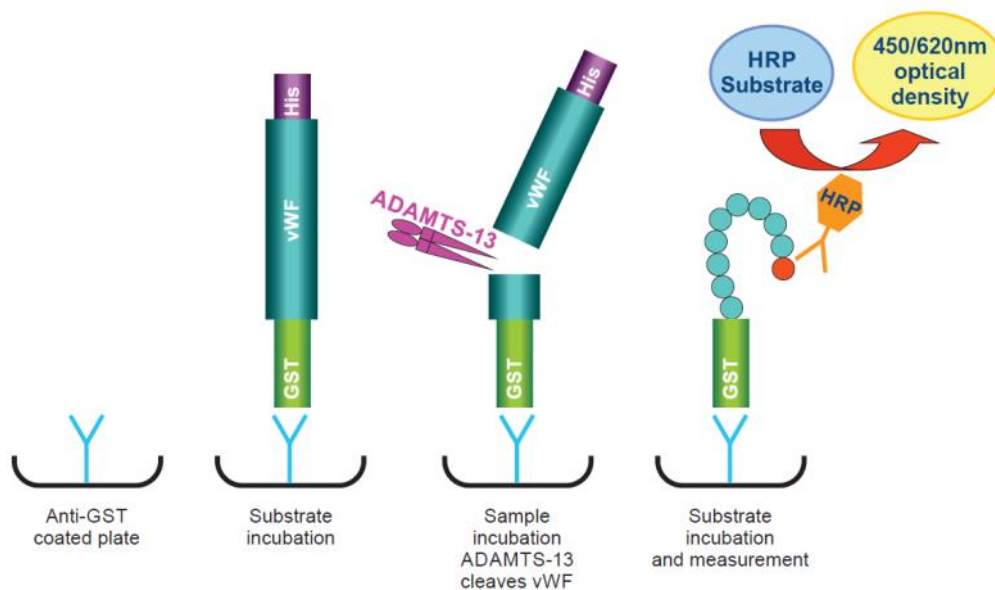
TECHNOZYM[®] ADAMTS-13 ACTIVITY (chromogenic)

Chromogenic ELISA for the determination of ADAMTS-13 activity

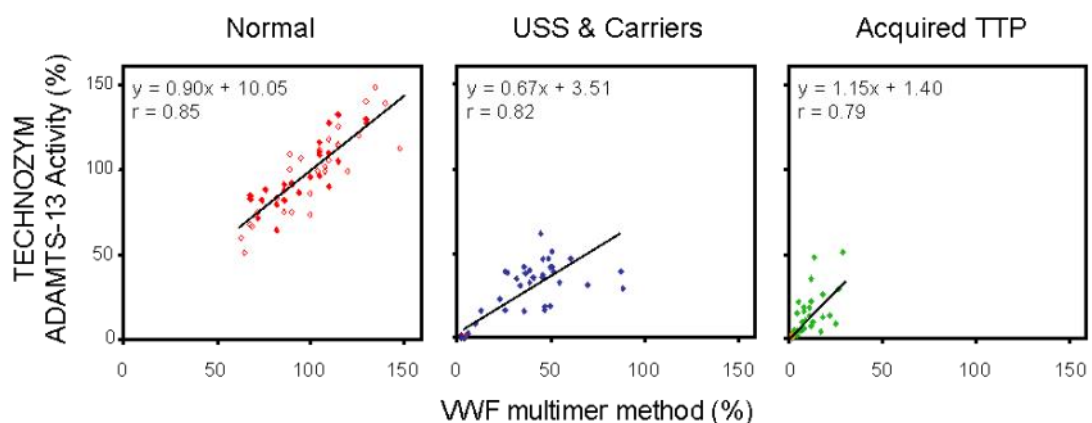


- High sensitivity for ADAMTS-13 activity down to 0.003 IU/mL
- Short assay time (3 h)
- Calibrators and controls are calibrated against the **IS for ADAMTS-13**
- No interference by Bilirubin, hemolytic or lipemic patient samples
- High precision in the decision range with intra-assay CVs <5% and inter-assay CVs <9%
- Can be used for ADAMTS-13 Inhibitor determination in Bethesda assay
- Demonstration video available on our TECHNOZOOM Youtube Channel (see QR-Code)

TEST PRINCIPLE



CORRELATIONS



Good correlation in ADAMTS-13 activity of different groups of samples

ADAMTS-13 Chromogenic ELISAs

Product	Description	REF	Package
TECHNOZYM® ADAMTS-13 Activity ELISA	12 x 8 anti GST strips	5450701	96 tests
	1 x 12 ml HRP Conjugate		
	1 x 30 ml Reaction Buffer		
	1 x 53 ml Wash Buffer Concentrate		
	1 x 12 ml TMB Substrate		
	2 x 6 ml GST-vWF73 Substrate		
	1 x 12 ml Stop Solution		
8 x 0.5 ml Calibrators and Controls			
TECHNOZYM® ADAMTS-13 Antigen ELISA	12 x 8 anti ADAMTS-13 strips	5450601	96 tests
	1 x 0.3 ml anti-ADAMTS-13 Conjugate		
	1 x 80 ml Wash Buffer Concentrate		
	1 x 90 ml Incubation Buffer		
	1 x 12 ml TMB Substrate		
	1 x 12 ml Stop Solution		
	7 x 0.5 ml Calibrators and Controls		
TECHNOZYM® ADAMTS-13 INH ELISA	12 x 8 rec. ADAMTS-13 strips	5450401	96 tests
	1 x 0.3 ml anti-IgG Conjugate	5450451	48 tests
	1 x 80 ml Wash Buffer Concentrate		
	1 x 90 ml Incubation Buffer		
	1 x 12 ml TMB Substrate		
	1 x 12 ml Stop Solution		
	7 x 0.5 ml Calibrators and Controls		

ADAMTS-13 Fluorogenic ELISAs

Product	Description	REF	Package
TECHNOZYM® ADAMTS-13 Activity/Antigen ELISA	12/6 x 8 anti-ADAMTS-13 strips	5450501	2 x 48 tests
	1 x 0.3 ml anti-ADAMTS-13 Conjugate		
	1 x 80 ml Wash Buffer Concentrate	5450551	48 tests
	1 x 90 ml Incubation Buffer		
	2/1 x 3 ml Activity Substrate		
	1 x 6 ml Antigen Substrate		
	1 x 0.7 ml Stable Peroxidase Solution		
	1 x 6 ml Stop Solution		
	7 x 0.5 ml Calibrators and Controls		



Demonstration video for **TECHNOZYM® ADAMTS-13 Activity ELISA** available on the **TECHNOCLONE** Youtube Channel (QR-Code)

For the ADAMTS-13 activity screening assay **TECHNOSCREEN® ADAMTS-13 Activity** see separate folder

