

# ATS-13<sup>®</sup>

## ADAMTS-13 ACTIVITY ASSAY

New!

## For the quantitative measurement of ADAMTS-13 protease activity

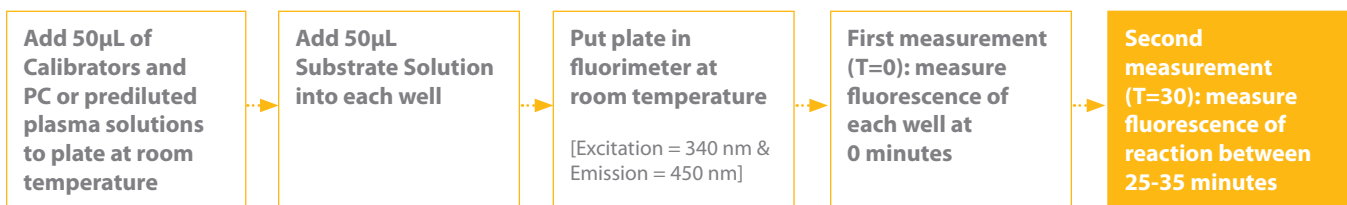
### GENERAL INFORMATION

A large body of literature shows that ADAMTS-13 is the protease responsible for cleaving von Willebrand Factor. Significant decrease or absence of ADAMTS-13 activity has been demonstrated in the plasma of patients with thrombotic thrombocytopenic purpura (TTP). The lack of ADAMTS-13 activity results in the accumulation of multimers of von Willebrand Factor in the plasma and ultimately intravascular platelet aggregation resulting in the clinical symptoms associated with TTP.<sup>3,4</sup> Mild or moderately decreased levels of ADAMTS-13 activity have also been associated with other disease states and conditions.<sup>1-4</sup> GTI Diagnostics has developed a quantitative assay for the measurement of ADAMTS-13 in human plasma using FRET Technology.

### PROCEDURE

Platelet poor plasma is obtained by centrifugation of blood samples collected into 3.2% sodium citrate. Following collection, the patient plasma samples are diluted in Specimen Diluent. The Calibrators and Controls require no dilution. The Calibrators (5 levels), Controls (2 levels) and the diluted patient plasma samples are added to the microwells of the black plate. Substrate is rehydrated in 25% DMSO (not supplied in the kit), diluted in Substrate Buffer and then added to each microwell. Fluorescence is measured (excitation = 340 nm and emission = 450 nm) immediately after adding substrate to obtain a time 0 reading. Following an incubation, a final fluorescence measurement is taken at any time between 25 and 35 minutes. A calibration curve is constructed using the fluorescence readings and the assigned values from the calibrators and is assessed for adequacy based on curve fit and recovery of the control values. The ADAMTS-13 activity of each sample is then calculated using the equation for the calibration curve.

### STEP-BY-STEP



### FEATURES & BENEFITS

- Non-kinetic read
- Quantitative
- Length of assay (including dilutions) is less than 1 hour
- Easy to use

### KIT COMPONENTS

- Black Microwell Strips
- Substrate Buffer
- Specimen Diluent
- Substrate
- Calibrators (5 levels)
- Low-range Positive Control
- High-range Positive Control

### ORDER INFORMATION

CATALOG NO:	ATS-13
DESCRIPTION:	ATS-13 <sup>®</sup> ADAMTS-13 ACTIVITY ASSAY
SIZE:	Maximum 40 Tests Per Kit
AVG SHELF LIFE:	12 Months
STORAGE:	Box A: -15 to -30°C Box B: 2 to 8°C

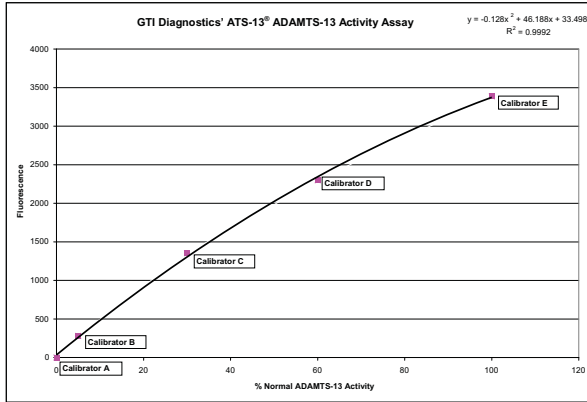
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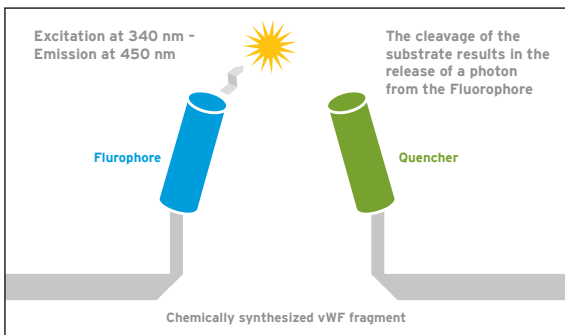
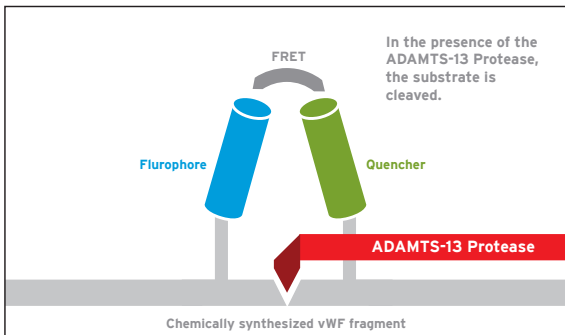
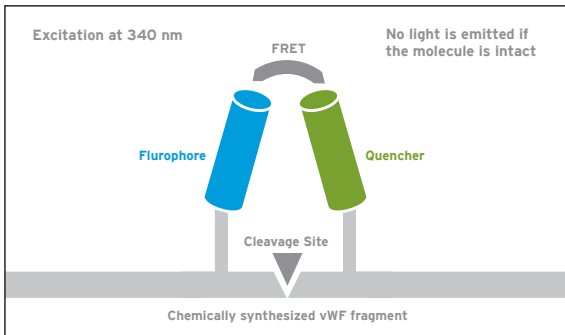
## RESULTS



The amount of ADAMTS-13 Activity present in the patient plasma sample is determined from the 5-point calibration curve. A spreadsheet is supplied to assist with this calculation.

## FLUORESCENCE RESONANCE ENERGY TRANSFER

Fluorescence resonance energy transfer (FRET) is a distance-dependent interaction between the electronic excited states of two molecules in which excitation is transferred from a donor molecule to an acceptor molecule without emission of a photon.



## REFERENCES

1. Kokame K, Matsumoto M, Fujimura Y, Miyata T. *Blood* 2004, **103**: 607.
2. Kokame K, Nobe Y, Kokubo Y, Okayama A, Miyata T. *Br J Haematol* 2005, **129**: 93.
3. Lämmle B, George JN. *Seminars in Hematology* 1 2004, **41**: 1.
4. Lämmle B, Kremer Hovinga JA, Alberio L. *J Thromb Haemost* 2005, **3**: 1663.



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