

ADAMTS-13 KITS FROM DIAPHARMA - COMPARISON SHEET

BRAND NAME	TECHNOZYM® ADAMTS-13	TECHNOZYM® ADAMTS-13 ACTIVITY ELISA	TECHNOZYM® ADAMTS-13 ANTIGEN ELISA	TECHNOZYM® ADAMTS-13 INH (for auto-antibodies to ADAMTS-13)
Catalog Number(s)	5450501: 2 x 48 det 5450551: 48 det	5450701	5450601	5450401: 2 x 48 det 5450451: 48 det 5450461: Calibrator Set 5 x 0.5 mL 5450463: Control Set 2 x 0.5 mL
Assay Type	Fluorogenic Activity AND Antigen	Activity	Antigen	Antigen
Determinations	48 or 96 test sizes	96 tests	96 tests	48 or 96 tests
510(k) Status	RUO	RUO	RUO	RUO
Methodology	Fluorogenic	ELISA	ELISA	ELISA
Measurement Principle	For the determination of ADAMTS13 activity and antigen in human plasma. For activity, add sample to microwell coated with anti-ADAMTS13 mAb directed against CUB domain & incubate for 2 hrs. Wash and add activity substrate; read at 360/460 nm over 15 min. For antigen, wash and add conjugate with anti-ADAMTS13-HRP, incubate 15 min, add ag substrate/TMB. Add stop solution, read at 360/460.	Chromogenic ELISA for the determination of ADAMTS-13 activity in human plasma. Add GST-vWF73 substrate to anti-GST ab coated plate and incubate. Add sample and incubate; ADAMTS13 in sample cleaves vWF73 substrate. Add HRP-conjugated ab directed against cleavage site of vWF substrate; read at 450 nm.	Chromogenic ELISA for the determination of ADAMTS-13 antigen concentration in human plasma. Add samples to microwells coated with anti-ADAMTS13 mAbs directed against CUB domain and incubate. Wash, and add conjugate of anti-ADAMTS13-HRP; incubate. Wash, add TMB substrate, incubate, add stop solution and read at 450 nm.	ELISA for detection of human autoantibodies (IgG) in serum or plasma against ADAMTS-13. Anti-ADAMTS13 autoantibodies preferentially bind to the cysteine-rich spacer region of ADAMTS13. Add sample to microwells coated with r-ADAMTS13. Incubate 1 hr and wash. Add conjugate of anti-human IgG-HRP and incubate 1 hr. Wash, and add TMB substrate solution; incubate 10 min. Add stop solution, read at 450 nm.
Sensitivity	Below 5%	0.50%	0.50%	0.50%
Assay Time	Incubation Times: Activity: 135 min Antigen: 75 min Total = 210 min (3.5 hrs)	3 hrs	195 min (3.25 hrs)	130 min (~2.15 hrs)
Additional Features	Protocols for BioTek FLx800 TBI, BMG Fluostar, & Ceveron alpha available. Calibrators and controls included.	No need for any special technique or instrument, just standard ELISA equipment. Calibrators and controls included.	No need for any special technique or instrument, just standard ELISA equipment. Calibrators and controls included.	Differentiates between anti-ADAMTS-13 antibody caused acute TTP, such TTP in remission and other forms of TTP not accompanied by auto-antibodies. Highly specific and can clearly differentiate between TTP samples and other samples with auto-antibodies (e.g. Lupus) or high IgG concentration. Calibrators and controls included AND can be purchased separately. Calibration of the assay is performed by defining arbitrary units using reference plasma with high anti-ADAMTS13 titer. All standards are calibrated against this plasma.
Sample	Plasma in 0.11 mol/L sodium citrate (can be stored at room temp for 3 hours or at -20°C for 6 months)	Plasma in 0.109 mol/L sodium citrate or EDTA (can be stored at room temp for 8 hours -20°C for 6 months)	Plasma in 3.2% or 3.8% sodium citrate (can be stored room temp for 8 hours or at -70°C for 1 month)	Plasma in 3.2% citrate. After thawing frozen samples, the assay must be performed within 2 hours.

Background: ADAMTS 13 (a disintegrin and metalloprotease with thrombospondin type 1 repeats); AKA: vWF cleaving protease, which describes its role. Defect of the enzyme ADAMTS-13 main cause of the thrombotic disorder, Thrombotic Thrombocytopenic Purpura (TTP). ADAMTS-13 is an enzyme that specifically cleaves unusually large von Willebrand Factor multimers, which induce platelet thrombus formation under high shear stress. If the activity of ADAMTS-13 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. While no diagnostic criteria have been established, generally an ADAMTS13 level of LT 10%, taken along with patient history and other platelet assays, indicates TTP.