

MRX FREE PROTEIN S



Inherited and acquired protein S deficiency is an important risk factor for deep venous thrombosis (DVT), and pulmonary embolism (PE). Measurements of free protein S can better discriminate between the different subtypes of protein S deficiency than what measurement of only total protein S concentrations can, and has therefore become an important tool in clinical thrombosis investigations.

MRX Free Protein S (FPS) is a latex immunoassay for the quantitative determination of free protein S in citrated plasma. MRX FPS is suitable for automatic coagulation and clinical chemistry instruments using turbidimetric detection in the 600 - 800 nm wavelength range.

Quantitative determination of FPS in plasma is used in clinical investigations of different diseases, e.g. acquired protein S deficiency which can be caused by several disorders and treatments. Protein S is a vitamin K dependent glycoprotein with anticoagulant properties and in the presence of calcium, protein S acts as a cofactor to, and forms a complex with activated protein C (APC). The complex adheres to negatively charged phospholipid membranes which increases the anticoagulant activity of APC. The normal total concentration of protein S in plasma is in the range 20 - 25 mg/L; approximately two thirds of this is bound to C4b-binding protein (C4BP), whereas the remaining non-bound fraction is FPS.

MRX FPS consists of sub-micron sized polystyrene particles coupled to two different monoclonal antibodies specific for protein S. This system is not sensitive to protein S bound to C4BP, and therefore only reacts with FPS. When the reagent in MRX FPS is exposed to a plasma sample containing FPS, the particles will agglutinate, giving rise to increased light-scattering. When exposed to the appropriate wavelength of light, the increase in measured turbidity, or light-scattering, is proportional to the amount of FPS in the sample.

- » Latex immunoassay
- » High precision
- » Specific for free protein S
- » Good correlation to existing free protein S assays
- » Calibrated against WHO 2nd International Standard, NIBSC 03/228

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DETAILS & TYPICAL DATA

Product form:	Liquid components
Origin:	Monoclonal antibodies
Additional products needed:	<ul style="list-style-type: none">• Eximius Control Plus (L1/L2/L3) (MRX180-MRX183)• Scandinavian Multi Plus Control (L1/L2) (GHI164/GHI170)• FPS Calibrator (MRX1206)• Sample Diluent (0,9 % NaCl) (MRX184) for calibrator dilutions• Diluent (GHI154)
Wavelength:	600-800 nm
Linear range:	20-150 (FPS %)
Precision:	Intra-device (CV %): <ul style="list-style-type: none">• L1: 4.01• L2: 2.83• L3: 3.01
No interference with:	UF and LMWH <100 U/mL, Bilirubin < 0,8 g/L, Triglycerides <30 g/L, Hemoglobin <10 g/L

STABILITY & STORAGE

Storage:	2-8 °C
Shelf-life:	18 months at 2-8 °C
Open-vial stability:	4 weeks at 2-25 °C

ORDERING INFORMATION

Reference number	Product description	Size
MRX153	MRX FPS (latex + reaction buffer)	3x2,5 mL + 3x4 mL
MRX180	Eximius Control Plus (L1+L2+L3)	4+4+2x1 mL
MRX181/182/183	Eximius Control Plus (L1/L2/L3)	10x1 mL pack per level
GHI164/170	Scandinavian Multi Plus Control (L1/L2)	10x1 mL pack per level
MRX1206	FPS Calibrator	1x1 mL
MRX184	Sample Diluent (0,9 % NaCl)	10x8 mL