Der Inhalt dieses Dokuments dient lediglich als Beispiel, die aktuellste Version senden wir gerne zu: info@coachrom.com. The content of this document is an example only. You may request the latest version at: info@coachrom.com

Anti-Human Factor XIII
Monoclonal 0.50 mg

Ref#: MAB-HF13
Lot#: xxxxxx
Exp. Date: xxxx-xx

Store at -20°C

For Research Use Only
Not for Use in Diagnostic Procedures
For *in vitro* use only

Format:	Mouse monoclonal antibody purified by protein G affinity chromatography from serum-free cell supernatant. Lyophilized from a ≥1mg/mL solution in 20 mM sodium phosphate, 150 mM NaCl, 1% (w/v) mannitol, pH 7.4
Clone ID#:	033
Storage:	Store unopened vial at -20°C until its expiration date. Reconstitute with aqua dest and freeze aliquots at -20°C or below. Avoid freeze/thaw cycles. Expires 2 years after reconstitution. Alternatively, add 0.02% (w/v) sodium azide to reconstituted solution and store at 4°C
Total Protein:	0.50 mg
Applications:	Solid-phase ELISA, Western blot. For Research Use Only. Not for Use in Diagnostic Procedures. For *in vitro* use only
Volume:	1 vial containing 0.50 mL monoclonal anti-human FXIII
Concentration:	1 mg/mL, determined by absorbance measurement at 280 nm and using an extinction coefficient $E^{1\%}_{280}$ of 1.4
Working Concentration:	Approximately 1 µg/mL. Titer antibody in specific assay
Specificity:	MAB-HF13 binds to the B subunit of human Factor XIII (FXIII-B)

Human Coagulation Factor XIII (FXIII, fibrin-stabilizing factor) is a plasma transglutaminase that circulates as a heterotetramer (FXIII-A_2B_2) made up of two catalytic A subunits (83 kDa each) and two non-catalytic B subunits (80 kDa each). The A subunits are synthesized mainly by cells of bone-marrow origin (megakaryocytes/platelets, monocytes and macrophages). The B subunits are synthesized and secreted by hepatocytes. Each B subunit consists of ten short consensus repeats (“sushi” domains). The B subunits act as carrier proteins for the A subunits: they stabilize them, protect them from premature activation and prolong their half-life in plasma. B subunits are present in plasma in excess, so a substantial share circulates free and not bound to the A subunits.

In the final stage of the coagulation cascade, thrombin cleaves the Arg37–Gly38 peptide bond near the N-terminus of each A subunit and releases the activation peptide. In the presence of calcium ions, the B subunits then dissociate. This exposes the active-site cysteine of the A subunits and produces activated Factor XIII (FXIIIa). FXIIIa catalyzes the formation of covalent ε-(γ-glutamyl)lysine isopeptide bonds between fibrin γ- and α-chains. This crosslinks the fibrin network and makes the clot mechanically stable. FXIIIa also crosslinks α_2-antiplasmin and other proteins (such as fibronectin) to fibrin, which makes the clot resistant to fibrinolysis.

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