Aalto Scientific, Ltd.

D-Dimer

Source:	Human Plasma	Purity:	Partially Purified
Form:	Liquid	Storage:	-80°C

D-dimer is a byproduct of the breakdown of fibrin, the fibrous protein that makes up a significant portion of blood clots. Fibrinogen, a plasma glycoprotein precursor of fibrin, consists of three domains, two domains on the ends and one domain separating them in the middle. When fibrinogen is cleaved during the initiation of a clot, fibrinogen becomes fibrin, which forms an insoluble fibrous lattice that is subsequently cross linked and strengthened. The primary enzyme responsible for breaking down the fibrin clot (fibrinolysis) is called plasmin. When plasmin cleaves the cross linked fibrin polymer, several types of breakdown products are produced. One of these products is called D-Dimer, a protein containing two adjacent domains from fibrin. Since the domains in fibrinogen are not adjacent, D-dimer can only be produced from the breakdown of the cross-linked fibrin polymer. Thus D-dimer is not normally found in serum or plasma, but is present only if fibrinolysis has occurred and is therefore an excellent marker of the breakdown (and therefore the presence) of a blood clot. As such, the measurement of plasma or whole-blood D-dimer is a very useful test for diagnosing conditions which result from blood clots, especially those that are difficult to otherwise detect, and also in distinguishing conditions which have otherwise similar symptoms and clinical findings.

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