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Unfractionated Heparin (UFH) ELISA Kit
for Buffer/Urine Samples

INTENDED USE: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR CLINICAL OR DIAGNOSTIC USE.

Kit includes:

Heparin-coated 96-well plate
UFH (Sigma) Standard (10 µg/ml)
Detector -Enzyme Conjugate vial
Conjugate Diluent
TMB Solution
Stop Solution, 0.5M H₂SO₄
Wash Concentrate 10X, (dilute 1 part plus 9 parts water to make TBS plus 0.05% TWEEN 20)
Standard Diluent, TBS (150 mM NaCl, 10 mM Tris pH 7.5)

Researcher must provide:

Pipettes
Absorbance microplate reader
Plate Cover

Storage and Stability

Kit can be stored unopened at 4°C for up to six months. Opened and reconstituted solutions can be used for up to one week when stored at 4°C. All components and solutions should be protected from light.

Background

Heparin is a glycosaminoglycan with alternating uronic acid and aminoglycoside units. It is an anticoagulant used either in its native unfractionated form (UFH) MW ~16 kD or in various partially depolymerized forms (LMWH) of 4-8 kD. The heparin-ELISA product number K-1900 is a quantitative enzyme-linked assay designed for the *in vitro* measurement of unfractionated heparin levels in low protein content fluids such as buffer or urine. This assay measures heparin directly using a heparin binding protein which has been conjugated to HRP.

The heparin-ELISA is a competitive assay in which the colorimetric signal is inversely proportional to the amount of heparin present in the sample. Samples to be assayed are first mixed with the Detector-Enzyme Conjugate in wells of the heparin coated plate. Heparin in the sample competes with heparin bound to the plate for binding of the Detector-Enzyme Conjugate. The concentration of heparin in the sample is determined using a standard curve of known amounts of heparin.

Reagent Preparation

Heparin Standards: Make dilutions of the appropriate heparin Standard using the Standard Diluent to obtain standards of 0.03, 0.1, 0.3, 1.0, 3.0 and 10.0 µg/mL. Kit standards are prepared from Sigma material. **Standardization should be performed using heparin that is the same heparin type contained in your unknowns.**

