



Canine prothrombin ELISA kit-Quantitative competitive

Cat. No.:	0126WXX-1586
Assay Type:	Quantitative competitive ELISA
Target Species:	Canine
Assay Target:	Prothrombin
Size:	48T; 96T

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description

Canine prothrombin ELISA kit-Quantitative competitive is an ELISA-based *in vi tro* research tool designed specifically for the quantitative detection of prothrombin in canine samples with a range of 2.5-50 mg/dL and a minimum detectable dose (sensitivity) of 0.1 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

The prothrombin ELISA kit utilizes a competitive enzyme immunoassay technique involving a monoclonal anti-prothrombin antibody and a prothrombin-HRP conjugate. Samples and assay buffers are co-incubated with the prothrombin-HRP conjugate in a pre-coated microplate for one hour. During this process, endogenous prothrombin from the sample competes with the HRP-labeled conjugate for a limited number of antibody binding sites. Following the incubation period, the wells are decanted and washed five times to remove unbound reagents. An HRP-specific substrate is then introduced, forming a blue complex that shifts to yellow upon the addition of a stop solution. The resulting color intensity, measured spectrophotometrically at 450 nm, is inversely proportional to the prothrombin concentration. Sample concentrations are determined by interpolating the optical density (O.D.) against the established standard curve.



Background	Prothrombin is a vitamin K-dependent glycoprotein synthesized by the liver and serves as a key precursor in the blood coagulation cascade. Upon activation, it converts to thrombin, a core serine protease essential for forming fibrin clots and activating other coagulation factors. This process is vital for maintaining blood homeostasis, inflammatory responses, and wound healing. Prothrombin is closely associated with obesity-related complications.
Synonyms	Coagulation factor II; F2
Formula Weight	70,037 Da
Applications	Canine prothrombin ELISA kit-Quantitative competitive is used to quantify prothrombin in serum, plasma, cell culture supernatants, body fluid, tissue homogenate of canine, providing data to support research in a wide range of areas, including inflammation, vascular biology, obesity, and others.
Research Area	Inflammation; Vascular biology; Obesity

Specification

Sample Type	Serum; Plasma; Cell culture supernatants; Body fluid; Tissue homogenate
Detection Range	2.5-50 mg/dL
Sensitivity	0.1 ng/mL
Cross-reactivity	No significant cross-reactivity or interference was observed.
Recovery	94-103%
Storage	Store at 2-8°C.