Rat C-telopeptide of collagen (CTX) ELISA Kit

Catalog No: #EK11283

Package Size: #EK11283-1 48T #EK11283-2 96T

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Description

Product Name	Rat C-telopeptide of collagen (CTX) ELISA Kit
Brief Description	ELISA Kit
Applications	ELISA
Species Reactivity	Rat (Rattus norvegicus)
Storage	The stability of ELISA kit is determined by the loss rate of activity. The loss rate of this kit is less than 5% within the expiration date under appropriate storage condition. The loss rate was determined by accelerated thermal degradation test. Keep the kit at 37C for 4 and 7 days, and compare O.D.values of the kit kept at 37C with that of at recommended temperature. (referring from China Biological Products Standard, which was calculated by the Arrhenius equation. For ELISA kit, 4 days storage at 37C can be considered as 6 months at 2 - 8C, which means 7 days at 37C equaling 12 months at 2 - 8C).

Application Details

Detect Range:123.5-10000 pg/mL

Sensitivity:48.1 pg/mL

Sample Type:Serum, Plasma, Other biological fluids

Sample Volume: 1-200 µL

Assay Time:1-4.5h

Detection wavelength:450 nm

Product Description

Detection Method:SandwichTest principle:This assay employs a two-site sandwich ELISA to quantitate CTX in samples. An antibody specific for CTX has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and anyCTX present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for CTX is added to the wells. After washing, Streptavidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of CTX bound in the initial step. The color development is stopped and the intensity of the color is measured.Product Overview:The carboxyterminal telopeptide of type I collagen (ICTP) is an indicator of degradation of type I collagen. ICTP antigen consists of a trivalent collagen cross-link joining three polypeptide chains of which two are α1 chains of one collagen molecule while the third is derived from either an α1 or an α2 chain of the helical region of another molecule (Fig. 1) (Risteli et al. 1993). The major determinant for antigeneity must contain two phenylalanine-rich regions, which is only possible if the cross-link is trivalent in nature (Sassi et al. 2000). In osteoclasts, catepsin K cleaves the trivalently cross-linked ICTP structure at two sites between the phenylalanine-rich region and the cross-link, thereby destroying any reactivity with ICTP antibodies (Sassi et al. 2000). Therefore degradation of type I collagen in bone is not measurable by the present ICTP-test. ICTP is cleared from circulation by the kidneys and has a molecular mass of about 12 000C20 000 (Risteli et al. 1993).

Note: This product is for in vitro research use only