Datasheet for ABIN5665051

Testosterone ELISA Kit

1 Image | 1 Publication

Go to Product page

Overview

Quantity:	96 tests
Target:	Testosterone
Reactivity:	Various Species
Method Type:	Competition ELISA
Detection Range:	12.35 pg/mL - 1000 pg/mL
Minimum Detection Limit:	12.35 pg/mL
Application:	ELISA

Product Details

Sample Type:	Plasma, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	This assay has high sensitivity and excellent specificity for detection of High Sensitive Testosterone (Testo). No significant cross-reactivity or interference between High Sensitive Testosterone (Testo) and analogues was observed.
Sensitivity:	5.07 pg/mL
Grade:	High Sensitivity
Components:	• Pre-coated, ready to use 96-well strip plate • Plate sealer for 96 wells • Standard Diluent

Product Details

	• Assay Diluent A • Assay Diluent B • Stop Solution • Standard • Detection Reagent A • Detection Reagent B • TMB Substrate • Wash Buffer (30 x concentrate) • Instruction manual
Material not included:	• Microplate reader with 450 nm filter. • Precision single or multi-channel pipettes and disposable tips. • Eppendorf Tubes for diluting samples. • Deionized or distilled water. • Absorbent paper for blotting the microtiter plate. • Container for Wash Solution

Target Details

Target:	Testosterone
Alternative Name:	Testosterone (Testo) (Testosterone Products)
Target Type:	Hormone

Application Details

Application Notes:	• Limited by the current condition and scientific technology, we cannot completely conduct the comprehensive identification and analysis on the raw material provided by suppliers. So there might be some qualitative and technical risks to use the kit. • The final experimental results will be closely related to validity of the products, operation skills of the end users and the experimental environments. Please make sure that sufficient samples are available. • Kits from different batches may be a little different in detection range, sensitivity and color developing time. • Do not mix or substitute reagents from one kit lot to another. Use only the reagents supplied by manufacturer. • Protect all reagents from strong light during storage and incubation. All the bottle caps of reagents should be covered tightly to prevent the evaporation and contamination of microorganism. • There may be some foggy substance in the wells when the plate is opened at the first time. It will not have any effect on the final assay results. Do not remove microtiter plate from the storage bag until needed.

	• Wrong operations during the reagents preparation and loading, as well as incorrect parameter setting for the plate reader may lead to incorrect results. A microplate plate reader with a bandwidth of 10nm or less and an optical density range of 0-3 O.D. or greater at 450 ± 10nm wavelength is acceptable for use in absorbance measurement. Please read the instruction carefully and adjust the instrument prior to the experiment. • Even the same operator might get different results in two separate experiments. In order to get better reproducible results, the operation of every step in the assay should be controlled. Furthermore, a preliminary experiment before assay for each batch is recommended. • Each kit has been strictly passed Q.C test. However, results from end users might be inconsistent with our in-house data due to some unexpected transportation conditions or different lab equipments. Intra-assay variance among kits from different batches might arise from above factors, too. • Kits from different manufacturers for the same item might produce different results, since we have not compared our products with other manufacturers.
Sample Volume:	50 µL
Assay Time:	3 h
Plate:	Pre-coated
Protocol:	This assay employs the competitive inhibition enzyme immunoassay technique. A monoclonal antibody specific to High Sensitive Testosterone (Testo) has been pre-coated onto a microplate. A competitive inhibition reaction is launched between biotin labeled High Sensitive Testosterone (Testo) and unlabeled High Sensitive Testosterone (Testo) (Standards or samples) with the pre-coated antibody specific to High Sensitive Testosterone (Testo). After incubation the unbound conjugate is washed off. Next, avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. The amount of bound HRP conjugate is reverse proportional to the concentration of High Sensitive Testosterone (Testo) in the sample. After addition of the substrate solution, the intensity of color developed is reverse proportional to the concentration of High Sensitive Testosterone (Testo) in the sample.
Reagent Preparation:	1. Bring all kit components and samples to room temperature (18-25 °C) before use. If the kit is not used up all at once, remove only the strips and reagents for the current experiment and leave the remaining strips and reagents in the desired condition. 2. strong>Standard - Reconstitute the Standard with 1.0mL of Standard Diluent, kept for 10 minutes at room temperature, shake gently (not to foam). The concentration of the standard in the stock solution is 5,000pg/mL. Firstly dilute the stock solution to 1,000pg/mL and the diluted standard serves as the highest standard (1,000pg/mL). Then prepare 5 tubes containing 0.6mL Standard Diluent and produce a triple dilution series. Mix each tube thoroughly before the next transfer. Set up 5 points of diluted standard such as 1,000pg/mL, 333.33pg/mL, 111.11pg/mL, 37.04pg/mL, 12.35pg/mL, and the last tubes with Standard Diluent is the blank as 0pg/mL.

3. **Detection Reagent A** and **Detection Reagent B** - Spin or centrifuge the stock of Detection Reagent A and B briefly before use. Dilute to working concentration (1:100) with Assay Diluent A or B, respectively.
4. **Wash Solution** - Dilute 20 mL of Wash Solution Concentrate (30x) with 580 mL of deionized or distilled water to make 600 mL of Wash Solution (1x).
5. **TMB Substrate** - Aspirate the required amount of solution with sterile tip and do not return the residual solution back into the vial.

Note:

1. Serial dilution directly in the wells is not recommended.
2. Prepare standard within 15 minutes before assay. Do not dissolve the reagents directly at 37 °C.
3. Detection Reagent A and B are sticky solutions, so pipette them slowly to reduce volume errors.
4. Reconstitute Standard or working solutions of Detection Reagent A and B carefully according to instructions, avoiding foaming and mixing gently until crystals are completely dissolved. To minimize inaccuracy caused by pipetting, use small volumes and ensure pipettes are calibrated. It is recommended to aspirate more than 10 µL for one-time pipetting.
5. The reconstituted Standard, Detection Reagent A and B can only be used once.
6. When crystals have formed in the Wash Solution concentrate (30x), warm it to room temperature and mix gently until the crystals are completely dissolved.
7. Contaminated water or preparation containers affect the detection result.

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Assay Procedure:	1. Prepare all reagents, samples and standards, 2. Add 50µL standard or sample to each well. And then add 50µL prepared Detection Reagent A immediately. Shake and mix. Incubate 1 hour at 37 °C, 3. Aspirate and wash 3 times, 4. Add 100µL prepared Detection Reagent B. Incubate 30 minutes at 37 °C, 5. Aspirate and wash 5 times, 6. Add 90µL Substrate Solution. Incubate 10-20 minutes at 37 °C, 7. Add 50µL Stop Solution. Read at 450 nm immediately.
Assay Precision:	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level High Sensitive Testosterone (Testo) were tested 20 times on one plate, respectively. Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level High Sensitive Testosterone (Testo) were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100 Intra-Assay: CV<10%

Application Details

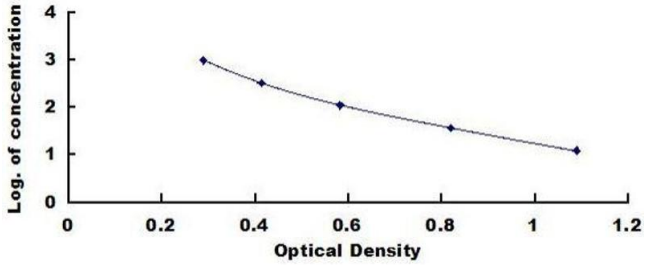
	Inter-Assay: CV<12%
Restrictions:	For Research Use only

Handling

Precaution of Use:	The Stop Solution suggested for use with this kit is an acid solution. Wear eye, hand, face, and clothing protection when using this material.
Handling Advice:	The stability of 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. To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.
Storage:	4 °C/-20 °C
Storage Comment:	• For unopened kit: All the reagents should be kept according to the labels on vials. The Standard, Detection Reagent A, Detection Reagent B and the 96-well strip plate should be stored at -20°C upon receipt while the others should be at 4°C. • For opened kit: When the kit is opened, the remaining reagents still need to be stored according to the above storage condition. Besides, please return the unused wells to the foil pouch containing the desiccant pack, and reseal along entire edge of zip-seal. Note: It is highly recommended to use the remaining reagents within 1 month provided this is within the expiration date of the kit. • For ELISA kit, 1 day storage at 37°C can be considered as 2 months at 4°C, which means 3 days at 37°C equaling 6 months at 4°C.
Expiry Date:	6 months

Publications

Product cited in:	Zhang, Yang, Zhang, Wang, Fang, Xue, Zhao, Gao, Pan, Gong: "Revisiting the relationships of 2D:4D with androgen receptor (AR) gene and current testosterone levels: Replication study and meta-analyses." in: **Journal of neuroscience research**, Vol. 98, Issue 2, pp. 353-370, (2020) (PubMed).



ELISA

Image 1. Typical standard curve

