VERSION 1.01

QLAQUINDIOX ELISA TEST KIT

MANUAL

ELISAKITS.ONLINE

By Immunomart

Olaquindox ELISA Test Kit

Catalogue Number. IP100047

Principle

This test kit is based on the competitive enzyme immunoassay for the detection of Olaquindox in the sample. The coupling antigens are pre-coated on the micro-well stripes. The Olaquindox in the sample and the coupling antigens pre-coated on the micro-well stripes compete for the anti-Olaquindox antibody. After the addition of the enzyme conjugate, the TMB substrate is added for coloration. The optical density (OD) value of the sample has a negative correlation with the Olaquindox in it. This value is compared to the standard curve and the Olaquindox concentration is subsequently obtained.

Technical specifications

This test kit is based on the competitive enzyme immunoassay for the detection of Olaquindox in the sample. The coupling antigens are pre-coated on the micro-well stripes. The Olaquindox in the sample and the coupling antigens pre-coated on the micro-well stripes compete for the anti-Olaquindox antibody. After the addition of the enzyme conjugate, the TMB substrate is added for coloration. The optical density (OD) value of the sample has a negative correlation with the Olaquindox in it. This value is compared to the standard curve and the Olaquindox concentration is subsequently obtained.

Components

1	Micro-well strips	12 strips with 8 removable wells each	
2	6× standard solution (1mL each)	0 ppb, 0.2 ppb, 0.6 ppb, 1.8 ppb, 5.4 ppb, 16.2 ppb	
3	Enzyme conjugate	12ml	red cap
4	Antibody working solution	7ml	blue cap
5	Substrate A	7ml	white cap
6	Substrate B	7ml	black cap
7	Stop solution	7ml	yellow cap
8	20× concentrated washing buffer	40ml	white cap
9	2× concentrated redissolving solution	50ml	transparent cap

Materials required but not provided

Equipments: microplate reader (450nm/630nm), homogenizer, oscillator, centrifuge, measuring pipets, nitrogen-drying device and balance (a sensibility reciprocal of 0.01 g), Incubator.
Micropipettors: single-channel 20 to 200µL and 100 to 1000µL and multi-channel 30～300µl;
Reagents: CH_3CN, N-hexane, Al_2O_3

Sample pre-treatment

Instructions

1) Only the disposable tips can be used for the experiments and the tips must be changed when used for absorbing different reagents;

2) Before the experiment, each experimental utensil must be checked to be clean and should be re-cleaned if necessary, in order to avoid the contamination that interferes with the experimental results.

Samples preparation

Sample redissolving solution: Dilute 2× concentrated redissolving solution with deionized water at 1:1

a) Tissues (Chicken, pork/liver)

1. Take 2± 0.05g of the homogenized sample into 50ml centrifuge tube, add 10mL CH_3CN (without water), shake properly for 2min. Centrifuge at above 4000r/min at room temperature (20 - 25℃) for 10min.
2. Take 5mL supernatant, blow to dry with nitrogen or air at 56℃.
3. Dissolve the dry residues in 2ml N-hexane, add 1mL of the diluted redissolving solution, mix thoroughly for 30s, centrifuge at above 4000r/min at room temperature (20-25℃) for 5min. Remove the up-layer N-hexane phase.
4. Take 50 µL for analysis.

Fold of dilution of the sample: 1

b) Feed

1. Weigh 1± 0.05 g homogenized sample into centrifuge tube, add 2g Al_2O_3, then 5ml CH_3CN, shake violently for 3min, centrifuge at above 4000r/min at 25℃ for 5min;
2. Take 50ul supernatant, mix with 950ul diluted redissolving solution evenly,take 50µL up-layer liquid for analysis.

Fold of dilution of the sample: 100

ELISA procedures

Instructions

1) Bring all reagents and micro-well strips to the room temperature (20-25 ℃) before use;
2) Return all reagents to 2-8 ℃ immediately after use;
3) The reproducibility of the ELISA analysis, to a large degree, depends on the consistency of plate washing. The correct operation of plate washing is the key point in the procedures of ELISA;
4) For the incubation at constant temperatures, all the samples and reagents must avoid light exposure, and each microplate should be sealed by the cover membrane.

Operation procedures

1) Take out all the necessary reagents and place at the room temperature (20-25 ℃) for at least 30min. Note that each reagent must be shaken to mix evenly before use;
2) Take the required micro-well strips and plate frames. Re-sealed the unused microplate, stored at 2- 8 ℃;
3) Solution preparation: dilute 40 mL of the 20× concentrated washing buffer with deionized water at1:19 (1 part 20× concentrated washing buffer + 19 parts deionized water), or prepare as quantity needed;
4) Numbering: number the micro-wells according to samples and standard solution; each sample and standard solution should be performed in duplicate; record their positions;
5) Add 50 µL of the sample or standard solution to separate duplicate wells, then add 50 µL of the antibody working solution into each well. Mix by shaking gently, seal the microplate with the cover membrane, and incubate at 37℃ for 30 min;

6) Wash the microplate with the washing buffer at 250 µL/well for four to five times; soak the well with the washing buffer for 15-30 sec, flap to dry with absorbent paper (if there are the bubbles after flapping, cut them with the clean tips);
7) Add 100 µL Enzyme conjugate to each well, mix by shaking gently, seal the microplate with the cover membrane, and incubate at 37℃ for 30 min; pour liquid out of wells, wash the microplate with the washing buffer, continue as step 6).
8) Coloration: add 50 µL of the substrate A solution and 50 µL of the B solution into each well. Mix by shaking gently, **and incubate at 37 ℃ for 15 min in the dark for coloration**;
9) Determination: add 50 µL of stop solution into each well. Mix by shaking gently. Set the wavelength of the microplate reader at 450nm to determine the OD value. (recommend to read the OD value at the dual-wavelength 450/630nm within 5 min) **.**

Result judgment

There are two methods to judge the results; the first one is the rough judgment, while the second is the quantitative determination. Note that the OD value of the sample has a negative correlation with the content of Olaquindox

Qualitative determination

The concentration range (ng/mL) can be obtained from the comparison the average OD value of the sample with that of the standard solution. Assuming that the OD value of the sample Ⅰ is 0.3, and that of the sample Ⅱ is 1.0, while those of the standard solutions are as the followings: 2.243 for 0ppb, 1.816 for 0.2ppb, 1.415 for 0.6ppb, 0.74 for 1.8ppb, 0.313 for 5.4ppb and 0.155 for 16.2ppb, accordingly the concentration range of the sample Ⅰ is 5.4 to 16.2ppb, and that of the sample Ⅱ is 0.6 to 1.8ppb.

Quantitative determination

The mean values of the absorbance values obtained for the percentage of the average OD value (B) of the sample and the standard solution divided by the OD value (B0) of the first standard solution (0 standard) and subsequently multiplied by 100%, that is,

Percentage of absorbance value = $(B / B_0) \times 100\%$

B—the average OD value of the sample or the standard solution
B_0—the average OD value of the 0 ng/mL standard solution
Draw the standard curve with the absorption percentages of the standard solutions and the semilogarithm values of the Olaquindox standard solutions (ng/mL) as Y- and X-axis, respectively. Read the corresponding concentration of the sample from the standard curve by incorporating its absorption percentage into the standard curve. The resulting value is subsequently multiplied by the corresponding dilution fold, thus finally obtaining Olaquindox concentration in the sample.
Using the professional analyzing software of this kit will be more convenient for the accurate and rapid analysis of a large amount of samples. (Please contact us for this software)

Precautions

1. The room temperature below 25 ℃ or the temperature of the reagents and the samples being not returned to the room temperature (20-25 ℃) will lead to a lower standard OD value
2. Dryness of the microplate in the washing process will be accompanied by the situations including the non-linear standard curves and the undesirable reproducibility
3. Mix every reagent and reaction mixture evenly and wash the microplate thoroughly, otherwise there will be the undesirable reproducibility

4. The stop solution is the 2 M sulfuric acid solution, avoid contacting with the skin;
5. Put the unused microplate into an auto-sealing bag to re-seal it. The standard substance and the colourless color former is light sensitive, and thus they cannot be directly exposed to the light
6. Do not use the kit exceeding its expiry date. The use of diluted or adulterated reagents from the kits will lead to the changes in the sensitivity and the detecting OD values. Do not exchange the reagents from the kits of different lot numbers to use
7. Discard the colouration solution with any color that indicates the degeneration of this solution. The detecting value of the 0 standard solution of less than 0.5 indicates its degeneration
8. The optimum reaction temperature is 37 ℃, and too high or too low temperatures will result in the changes in the detecting sensitivity and OD values.

Storage: store at 2-8 ℃, not frozen.
Expiry date: 12 months; date of production is on box.