Instructions for Use of Cell Residual Human IL-2 ELISA Detection Kit

This kit is intended for scientific use and not for diagnostic use

Cat. No. HG-IL002

Product introduction

Cell Residual Human IL-2 ELISA Detection Kit in BlueKit® series uses a double-antibody sandwich method for quantitative detection of human IL-2 protein content in serum, plasma or cell supernatant. Coat the specific anti-human IL-2 monoclonal antibody on a microplate, add the standard , test sample, and detection antibody into the reaction wells, incubate at room temperature, wash, and then add the Streptavidin-HRP for incubation. After washing, add chromogenic solution TMB. The shade of the color is proportional to the target protein concentration.

Detection range: 7.81-500 pg/mL

Sensitivity: 0.59 pg/mL

Precision: CV% ≤ 10%, RE% ≤ ±15%

Specification

96T

Usage

The product is used for the assay of human IL-2 protein content in serum, plasma, cell culture supernatant and other biological samples.

Kit composition

Components	Specification	Preparation
Coated Plate (CP)	8 wells x 12 strips	Ready-to-use
Human IL-2 Standard (S)	300μL x1 vial (5000pg/mL)	Dilute proportionally with sample diluent
Detection Antibody (DA)	6 mL × 1 bottle	Ready-to-use
Streptavidin-HRP (SH)	12 mL × 1 bottle	Ready-to-use
Assay Buffer (AB)	12 mL × 1 bottle	Ready-to-use
Sample Diluent (SD)	15 mL × 1 vial	Ready-to-use
10x Wash Buffer (WB)	50 mL × 1 bottle	Dilute with deionized water in a ratio of 1:9
TMB Substrate (TS)	12 mL × 1 bottle	Ready-to-use
Stop Solution (SS)	12 mL × 1 bottle	Ready-to-use
Sealer Film (SF)	5 films	Ready-to-use
Instruction For Use (IFU)	1 copy	Ready-to-use

Notes: All components are stored at 2-8℃.

Storage conditions and shelf life

The unopened kit is valid for 12 months at 2-8℃.

Materials to be self-prepared:

(1) Microplate reader

(2) Constant temperature incubator

(3) Micropipettes and tips

(4) Deionized or distilled water

(5) New filter paper

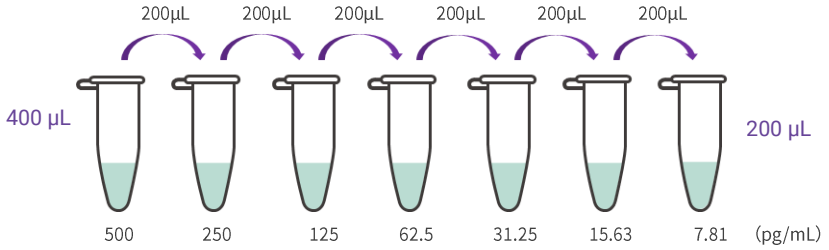
(6) Vortex oscillator

Reagent configuration

1x wash solution: According to the actual amount, take an appropriate amount of 10x wash concentrate and dilute it by 10 times with deionized water.

Creation of a standard curve

Human IL-2 Standard S 5000 pg/mL 40 µL+360 µL SD serves as the high standard (500 pg/mL). 200 µL of SD is added to each dilution tube and 1:1 dilution series are prepared using the high standard. Thoroughly mix each tube before performing the next transfer. SD is used as a zero standard (0 pg/mL).



Operating steps

Restore all reagents and samples to room temperature before testing.

1. Prepare all required reagents and working concentration standards.
2. Remove the unwanted strips, place them back into the foil pouch, and seal them again.
3. Add 50 µL detection buffer (AB) to each well.
4. Add 50 µL of standard (S) and sample. Ensure continuous spiking without interruption. The spiking process shall be completed within 15 minutes.

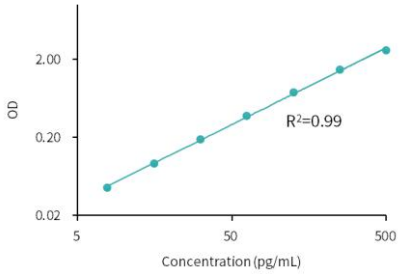
5. Add 50 µL of detection antibody (DA) to each well.
6. Seal the plate with a sealing film. Shake at 500 rpm and incubate at room temperature for 60 minutes.
7. Discard the liquid in the wells, add 300 µL wash solution to each well to wash the plate, and wash 4 times. Each time you wash the plate, pat it dry on absorbent tissue. For ideal experimental performance, the residual liquid must be removed thoroughly.
8. Add 100 µL Streptavidin-HRP (SH).
9. Seal the plate with a new sealing film. Shake at 500 rpm and incubate at room temperature (18-25℃) for 30 minutes.
10. Repeat step 7.
11. Add 100 µL of chromogenic solution to each well and incubate at room temperature for 10-15 minutes.
12. Add 100 µL stop solution to each well.
13. Within 30 minutes, determine the OD value at 450 nm wavelength of the microtiter plate, and set the correction wavelength as 570 nm or 630 nm.

Result processing

1. OD processing of the standard curve (See the following example. For example only, please refer to the actual measurement for details)

Standard concentration (pg/mL)	OD1	OD2	Mean value
500.00	2.6660	2.5960	2.6310
250.00	1.5240	1.4780	1.5010
125.00	0.7904	0.7754	0.7829
62.50	0.4035	0.3916	0.3976
31.25	0.2154	0.2062	0.2108
15.63	0.1140	0.1154	0.1147
7.81	0.0674	0.0665	0.0670
0.00	0.0214	0.0215	0.0215

2. The standard curve is obtained by fitting a straight line with 1 og of the theoretical concentration of the standard to the corresponding OD value (as shown in the following figure)



Precautions

1. For the first detection of samples, it is recommended to perform at least three consecutive dilutions to produce at least one diluted sample within the range of the standard curve.
2. Store reagents according to label instructions and equilibrate at room temperature before use.
3. Before using the coated microtiter plate, please balance to room temperature and then open the secondary package. The strips not used in the experiment shall be immediately placed back in the package for sealing and can be stored at 4℃ for one month. The remaining reagents shall be packaged or covered.
4. Please use disposable tips during the experimental operation to avoid cross-contamination.
5. Check various reagents in the kit before use. Dilution, spiking and termination of the reaction with reagents shall be thoroughly mixed or shaken well, which is particularly important for the experimental results.
6. The residual wash solution in the reaction wells during the washing process shall be patted thoroughly on a clean tissue until no watermark is visible. Do not place the tissue directly into the reaction wells to absorb water.
7. The substrate chromogenic solution is sensitive to light. Avoid prolonged exposure to light and avoid contact with metals that may affect the results.
8. This product is a disposable kit and shall be used within the validity period.

Disclaimer

In all cases, our liability for this product is limited to the value of the product itself.

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