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| 1. Identification |

Product name: ELISA kits of human IL-12

Reactions: 48/96 rxns

Cat. No.: PRA-HIL-12-48/PRA-HIL-12-96

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| 2. Description |

IL-12, an inflammatory cytokine primarily produced by macrophages and dendritic cells, plays a crucial role as the principal activator of T lymphocytes. Serving as a key interface in both innate and acquired immunity, this cytokine holds significance in immune system modulation. Consequently, IL-12 finds widespread application in laboratory studies as an essential inflammatory indicator, aiding in the assessment of disease conditions and the examination of inflammatory or anti-inflammatory effects of pharmaceuticals.

The present kit has been meticulously designed and crafted utilizing monoclonal antibodies specific to human IL-12. Consequently, it is not suitable for measuring analogous cases in animals.

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| 3. Kit Contents |

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| Component | **Cat. no** | Quantity |
| Human anti-IL-12 pre-coated plate  | PRA-IL12P | 96/48 vials |
| Standards | PRA-IL12SN1-4 | 200 µl |
| HRP-Avidin buffer | PRA-HA | 5 ml |
| HRP | PRA-HAA | 540 µl |
| Substrate | PRA-SU | 5 ml |
| Stopping | PRA-ST | 7 ml |
| 10X washing buffer | PRA-WB | 40 ml |
| Detection Ab | PRA-IL12D | 5 ml |

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| 4. Storage specifications |

All components of the ELISA kits can be stored at 4°C.

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| 5. Applications |

Detection of both inflammatory and anti-inflammatory factors through ELISA.

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| 6. Assay Procedure |

How to Prepare Solutions:

1. Washing Buffer:

 - Dilute the provided washing solution with distilled water at a 1:10 ratio.

2. HRP-Avidin:

 - Spin the HRP vial using a microfuge device, then add all its contents to the HRP-Avidin buffer vial. If quantities less than 48 assays are used, mix 416 µl of HRP-Avidin and 41 µl of HRP per 8-well row.

How to Work with the Kit to Measure IL-12:

1. Plate Preparation:

 - Remove the plate from the desired package and allow it to reach room temperature in a dry environment. Add 50 µl of standards 1 to 4 to the first to fourth wells.

2. Sample Incubation:

 - Add 50 µl of the desired sample to the remaining wells and incubate for 60 minutes on a 200 RPM shaker at room temperature.

3. Plate Washing:

 - After proper incubation, wash the plates three times using the washing solution. After adding the washing solution, incubate the plates for approximately 1 minute at room temperature and then drain.

4. Conjugated Antibody Addition:

 - Add 50 µl of conjugated antibody (Detection ab) to all wells and incubate for 60 minutes on a 200 RPM shaker at room temperature.

5. Plate Washing (Again):

 - After proper incubation, wash the plates three times using washing solution.

6. HRP-Avidin Addition:

 - Add 50 µl of HRP-Avidin solution to all wells and incubate for 30 minutes on a shaker (at least at RPM 200).

7. Plate Washing (Again):

 - After proper incubation, wash the plates five times using washing solution.

8. Substrate Addition:

 - Add 50 µl of substrate to all wells and incubate for 15 minutes. Note that 15 minutes is enough for incubation, but if the amount of color produced is low, the time can be increased to 20 minutes.

9. Stopping Reaction:

 - Add 25 µl of the stopping solution to all wells and measure the absorbance of the samples in an ELISA reader at a wavelength of 450 nm.

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| 7. Safety |

Direct contact with skin and eyes should be avoided. In the event of contact with these tissues, promptly rinse with copious amounts of water and seek immediate medical attention at the nearest medical center.

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| 8. Quality Certifications |

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| 9. Further information |

This product is exclusively developed, designed, and sold for research purposes only. It has not been tested for diagnostic or drug development applications, and is not suitable for administration to humans or animals.

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| 10. Other Kits |

Other ELISA kits:

Human:

IL-1β, IL-2, IL-4, IL-6, IL-8, IL-10, IL-12, IL-13, IL-17, IL-23, IL-29, IL-18A, TGF-β, VEGF, TNF-α, IFN-γ, CCL2 (MCP-1), CCL3 (MIP-1-alpha), CXCL10 (IP-10), CXCL12 (SDF-1), CCL21

Mouse:

IL-1β, IL-2, IL-4, IL-6, IL-10, IL-13, IL-33, IL-17, TNF-α, TGF-β, CCL3, IFN-γ,

Total IgG, Total IgE

Rat:

TNF-α, IL-1β, IL-6, IL-10, IL-18A

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| NOTE |

All products have been manufactured by Karmania Pars Gene Company in the Iran.