

(FOR RESEARCH USE ONLY. DO NOT USE IT IN CLINICAL DIAGNOSIS !)

Human Mumps Virus (MuV) IgG ELISA Kit

Catalog No: GEH044

96T

This manual must be read attentively and completely before using this product.

If you have any problem, please contact our Technical Service Center for help.

Tel: 400-967-3365

Email: techsupport@uni-science.com

Website: www.elabscience.cn

Please kindly provide us the lot number (on the outside of the box) of the kit for more efficient service.

Test principle

This ELISA kit uses Indirect -ELISA as the method to detect the MuV-IgG in human serum. The ELISA Microtiter plate provided in this kit has been pre-coated with MuV-IgG antigen. Samples are added to the ELISA Microtiter plate wells and the IgG antibody in which will be captured. Free components are washed away (including the specific IgG antibody). The “MuV antigen + anti-MuV-HRP conjugated antibody” is added to each well, the MuV-IgG antibody in captured IgG will specific bind to the MuV antigen + anti-MuV-HRP conjugated antibody. The TMB substrate is added after washing to initiate the color developing reaction. The presence of MuV-IgG can be determined according to the OD value after colorimetric assay with the Micro-plate Reader.

Kit components

Item	Specification
ELISA Microtiter plate	96 wells
Positive Control	1 mL
Negative Control	1 mL
HRP Conjugated Working Solution	12 mL
Sample Diluent	12 mL
20×Concentrated Wash Buffer	50 mL
Substrate Reagent A	6 mL
Substrate Reagent B	6 mL
Stop Solution	6 mL
Plate Sealer	3 pieces
Sealed Bag	1 piece
Manual	1 copy

Other materials required but not supplied

Micro-plate Reader with 450 nm wavelength filter or dual-wavelength (450/630 nm)

High-precision transferpette, EP tubes and disposable pipette tips

37°C Incubator or water bath

Deionized water

Absorbent paper

Loading slot for Wash Buffer

Notes

1. Wear gloves and work clothes during experiment, and the disinfection and isolation system should be strictly executed. All the waste should be handled as contaminant.
2. The Stop Solution is corrosive, it should be avoided to contact with skin and clothing. Wash immediately with plenty of water if contact it carelessly.
3. The ELISA Microtiter plate obtained from cold storage conditions should be adjusted to room temperature before use. The unused plate should be kept in a sealed bag with desiccant.
4. Concentrated Wash Buffer at low temperature condition is easy to crystallize, it should be adjusted to room temperature in order to dissolve completely before use.
5. Each well must be filled with liquid when washing in order to prevent residual free enzyme.
6. The tested sample should be kept fresh.
7. The results shall depend on the readings of the Micro-plate Reader.
8. **Each reagent is optimized for use in the GEH044. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other GEH044 with different lot numbers.**

Storage and expiry date

Please store the opened kit at 2-8°C, protect from light and moisture. The shelf life of the opened kit is up to 1 months.

Expiry date: expiration date is on the box.

Requirements of sample

1. **Serum:** Human serum can be used as detected sample. Fresh collected serum samples should be fully centrifuged, then take clear liquid for test. The suspended fibrous protein may cause a false positive result if not fully precipitated.
2. Avoid of samples with hyperlipidemia (triglyceride > 20g/L), hemolysis (hemoglobin > 10 g/L) or jaundice (bilirubin > 0.2 g/L). Obviously contaminated samples can't be detected.
3. Samples can be stored at 2-8°C for one week. If samples not tested in a week, store them at -20°C and avoid freeze-thaw cycles.
4. **Wash Buffer:** The 20×Concentrated Wash Buffer should be adjusted to room temperature to make the sediment dissolved fully before use, and then dilute it with deionized water at 1:19.

Assay procedure

Restore all reagents and samples to room temperature (25°C) for 30 min before use. All the reagents should be mixed thoroughly by gently swirling before pipetting. Avoid foaming. The unused ELISA Microtiter plate should be sealed as soon as possible and stored at 2-8°C.

1. **Number:** number the sample and control in order (multiple well), and keep a record of control wells and sample wells. Set 1 well for blank control, 3 wells for negative control and 2 well for positive control. **Samples need test in duplicate** (Blank well is not necessary for dual-wavelength detection).
2. **Add sample:**
 - (1) Add 100 µL of **Positive/Negative Control** respectively to **Positive/Negative Control** wells, keep the blank control well empty. (Blank well is not necessary for dual-wavelength detection)
 - (2) Dilute the tested **Serum** with **Sample Diluent** at 1:10 (add 100 µL of Sample Diluent to the reaction well, and then add 10 µL of serum sample), mix fully.
3. **Incubate:** Gently tap the plate to ensure thorough mixing. Cover the ELISA plate with sealer. Incubate for 30 min at 37°C.
4. **Wash:** After incubation, remove the plate sealer and aspirate the liquid of each well. Repeat the washing procedure for 5 times with **Wash Buffer** and immerse for 30-60 sec each time.
5. **HRP conjugate:** Add 100 µL of **HRP Conjugate Working Solution** to each well except the blank control well.
6. **Incubate:** Cover the ELISA plate with sealer. Incubate for 30 min at 37°C.
7. **Wash:** Repeat step 4.
8. **Add substrate:** Add 50 µL of **Substrate Reagent A** and 50 µL of **Substrate Reagent B** to each well. Gently tap the plate to ensure thorough mixing. Cover with a new plate sealer. Incubate for 15 min at 37°C in shading light.
9. **Stop reaction:** Add 50 µL of **Stop Solution** to each well, gently tap the plate to ensure thorough mixing.
10. **OD Measurement:** Set the micro-plate reader wavelength at 450 nm (it is recommended to set the dual wavelength at 450 nm/630 nm) to detect A value of each well. Blank well is not needed when using dual wavelength 450 nm/630 nm for detection. This step should be finished in 10 min after stop reaction.

Reference value

Normally, blank well (just chromogenic agent and stop solution) absorbance ≤ 0.08 . Positive control (PC) $A_{450} > 0.80$. Negative control (NC) $A_{450} < 0.10$.

Interpretation of test results

Calculate the Cut Off: Cut Off (C.O) = 0.10 + negative control (NC) average A value (when NC average $A_{450} < 0.05$, calculate at 0.05; while NC average $A_{450} \geq 0.05$, calculate at the actual value).

1. Positive result: Sample absorbance $\geq$ Cut Off.
2. Negative result: Sample absorbance $<$ Cut Off.
3. Negative result indicates there is no MuV-IgG antibody detected in samples, while positive result means the opposite.
4. The positive result of MuV -IgG antibody is an important index of MuV acute infection.

Limitations of test method

1. This test is only used as the qualitative detection of MuV -IgG antibody in serum of human.
2. The detection results of this kit are only for reference. For confirmation of the result, please combine the symptoms and other methods of detection, this detection cannot be used as the only criteria for result.