

## < RDT / Immune Diagnosis Rapid Kit (IgG/IgM detection) > VS

### <Molecular Diagnosis Kit (RNA Extraction Kit & RT-PCR kit)>

#### Limitation & Narrow Detection of IgG/IgM Kit for COVID\_19

Generally, there is frequently the limitation to detect virus using immune diagnosis method. In an infected person, pathological phenomena in which the virus is enclosed in the lungs often appear. So, it is difficult to pinpoint whether the symptoms in an infected person are due to a cold, flu or viral infection. Additionally, it is well known that immune diagnosis has many errors, especially the corona virus diagnosis kit didn't directly identify pathogens.

Usually, IgM levels rise when external infections occur, and this phenomenon happened by corona and influenza virus, or common catching cold. Therefore, immune diagnosis is itself has inaccurate diagnosis problem and an error.

It is also well known in academia that the corona virus does not carried by the blood because of this is a respiratory virus.

The pregnancy diagnosis kit is to check directly specific antigen level, but the corona immune diagnostic kit has a different meaning when compared that. First of all, since there are few viruses that can be extracted from the blood, it is to check the amount of IgM that occurs a lot when it causes an immune response by viral infection. So, it is not known if the positive results by immune diagnostic kit is due to corona virus or not. Not only the coronavirus, most of respiratory viruses including influenza, cold, MERS virus has mostly the same. IgM is usually the first antibody produced by the immune system when a virus attacks, and IgG antibodies that develop in most patients within seven to 10 days after symptoms of COVID-19 begin. Above all, the increment of both of IgM and IgG antibodies didn't mean the corona virus infection. This phenomenon means only suggest that immune response happened by pathogens.

Immunodiagnosis can quickly and simply diagnose the presence or absence of a virus infection, but for accurate diagnosis corona virus infection, it must be diagnosed using molecular diagnosis.

Most important thing is the diagnosis/cure for corona virus infection even if vaccines and therapeutics are developed soon. For example, even ordinary cold patients may get a positive immune response by immune diagnostic kit.

Even if a common cold patient, a medical doctor may have the error of prescribing a corona cure due to a positive test. Therefore, accurate diagnosis is necessary for corona virus infection, and the molecular diagnosis using RT-PCR is offering most accurate at the current diagnostic technology level. Once the therapeutics and vaccines for corona virus is developed, the diagnostic business is bound to grow even bigger.

Molecular diagnostics can directly diagnose the corona virus present in the nasopharyngeal or oropharyngeal swabs of an infected patient, unlike immunodiagnosis using an antigen-antibody reaction. Viral RNA extraction kit and RT-PCR kit are must necessary for the molecular diagnostic process.

GentriBIO Inc. is concerned about the viral RNA isolation agent needed for molecular diagnosis using RT-PCR. Because this is an essential pre-step during diagnosis for viral infection and currently there is not enough the reagents which is essential material during viral RNA extraction. We applied for a patent of the fast and easy RT-PCR system at November 2019. As well as, we have secured the successes results of viral RNA isolation from viral sample and are preparing for patent application.

In other words, we were prepared both one step RT-PCR master mix, which is essential for molecular diagnosis, and viral RNA purification kit, which extracts viral RNA through swab. Preferentially, we secured quality control finished ingredients and other components to do the viral RNA extraction, only the subdivision and packing stage are left.

In other words, we have two products required for molecular diagnosis of corona virus such as viral RNA extraction kit and RT-PCR detection kit. Long-termly COVID-19 pandemic continues and there is also the possibility that COVID-19 variants will emerge, therefore these two products will be in constant demand until disappear the corona virus.

Recently, the demand for viral RNA extraction kit has skyrocketed, that is out of stock, some Indian buyers are having a hard time finding for viral RNA extraction kit. Additionally, RT-PCR kit is supplied to the world without any problem, but it can't perform RT-PCR diagnosis without viral RNA extraction step. Furthermore, the amount of viral RNA extraction kit is not enough to use the corona virus diagnosis.

We secured a million viral RNA extract kit now and also, we can supply this within a couple of months. Our viral RNA purification kit components include:

1. Mini Spin Column
2. Lysis Buffer
3. Wash Buffer 1
4. Wash Buffer 2
5. Collection tubes
6. RNase free water