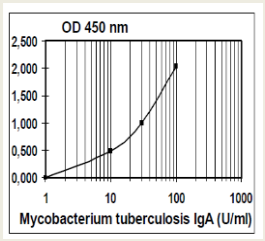
Mouse Anti-Mycobacterium Tuberculosis IgA ELISA kit, 96 tests # 990-205-TMA

Mycobacterium tuberculosis IgA antibody ELISA kit has been designed for the detection of IgG class antibodies against M. tuberculosis in serum and plasma for animals vaccinated with tuberculosis vaccines. Antigens used represent a mixture of M. tuberculosis. Therefore, the kit will detect antibodies to several antigens. ADI has separate ELSIA kits to detect antibodies to various antigens (Ag85A and Ag85 complex and individual proteins). Research use only (RUO).



Interpretation of Results

U/mL	Interpretation
< 8	negative
8 - 12	equivocal
> 12	positive

ELISA Kit Features

- Mycobacterium tuberculosis virus, pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over 6-12 months.
- Anti-tuberculosis IgA calibrators (1, 10, 50, 100 U/ml).
- Sample size 100 ul (serum or plasma diluted ~1:100 or more).
- 110 minutes, 3 incubation steps (60-+30+20) at room temp
- Sensitivity 2 U/ml.
- Contains all necessary reagents. Shelf life ~12 months.

For in vitro research use only.

Assay Procedure:

Allow all reagents to reach room temperature. Arrange and label required number of strips. Please consult the detailed manual provided with the kit for "FINAL UPDATED PROTOCOL".

Step 1. Pipet **100 ul** controls, **standards**, pre-diluted samples (~1:100) into wells. Cover and incubate for 60 mins at room temp;
Step 2. Aspirate and wash 3 times; Add **100 ul** of antibody conjugate to wells. Cover and incubate for 30 min at room temp.
Step 3. Aspirate and wash 3 times; Add **100 ul** Substrate Solution. Cover and incubate for 20 minutes at room temp.
Step 4 Add **100ul** Stop Solution. Read at 450nm immediately.

Results: Unknown sample values are calculated from the calibrator in arbitrary units.
Specifications: Inter-assay and intra-assay precision <5-10%.

General Information

Tuberculosis, MTB, or TB (short for tubercle bacillus) is a common, and in many cases lethal, infectious disease caused by various strains of mycobacteria, usually Mycobacterium tuberculosis. The infectious agents of tuberculosis are acid-resistant rod-like bacteria of the family Mycobacteriaceae, genus Mycobacterium. The organism was detected by Robert Koch in 1882. Mycobacterioses (tuberculosis, leprosy, atypical mycobacterioses, paratuberculosis, and perhaps Crohn's Disease) are diseases of men and animals with the largest diffusion on earth. One third of the world's population is thought to have been infected with M. tuberculosis, with new infections occurring at a rate of about one per second. TB killed 1.4 million people in 2010. Tuberculosis typically attacks the lungs, but can also affect other parts of the body. It is spread through the air when people who have an active TB infection cough, sneeze, or otherwise transmit their saliva through the air. Most infections are asymptomatic and latent, but about one in ten latent infections eventually progresses to active disease which, if left untreated, kills more than 50% of those so infected. Individuals with HIV are at risk for infection by tuberculosis due to their impaired immune system. The two antibiotics most commonly used are isoniazid and rifampicin but antibiotic resistance is a serious concern. Treatment of TB uses antibiotics to kill the bacteria. Drug-resistant TB is a serious public health issue in many developing countries, as its treatment is longer and requires more expensive drugs.

The main cause of TB is Mycobacterium tuberculosis, a small, aerobic, nonmotile bacillus. The high lipid content of this pathogen accounts for many of its unique clinical characteristics. If a Gram stain is performed, MTB either stains very weakly "Gram-positive" or does not retain dye as a result of the high lipid and mycolic acid content of its cell wall. The only currently available vaccine as of 2012 is bacillus Calmette–Guérin (BCG with live attenuated bacteria) which, while it is effective against disseminated disease in childhood, confers inconsistent protection against contracting pulmonary TB. Nevertheless, it is the most widely used vaccine worldwide, with more than 90% of all children being vaccinated. A number of new TB vaccines are currently in phase I and II clinical trials. MVA85A (modified vaccinia Ankara 85A, Oxford University) is a subunit vaccine to BCG. This vaccine produces higher levels of long-lasting cellular immunity when used together with the old TB vaccine called BCG. It uses the attenuated MVA as a vaccine delivery platform to present antigen 85A to the immune system. The other strategy is using genetically modified vaccinia virus. Three closely related components, termed antigens 85A, 85B, and 85C, have been demonstrated in M. bovis BCG and M. tuberculosis. Although the antigens are genetically distinct, they are highly homologous and cross-react with polyclonal and monoclonal antibodies raised against individual components. The genes encoding antigen 85A, a 32-kDa protein also referred to as P32, have been cloned from M. bovis BCG and M. tuberculosis, while genes for 85B, a 30- to 31-kDa protein variously termed MPB59 or alpha antigen, have been isolated from M. bovis BCG, Mycobacterium kansasii, and Mycobacterium leprae. Sequence analysis revealed 85% identity between the M. bovis BCG 85A and 85B components in the amino acid sequence of the mature secreted proteins. Many mycobacterial antigens have been identified, such as 71, 65, 38, 23, 19, 16, 14 and 12-kDa proteins. The 38-kDa protein is an immunodominant lipoprotein antigen isolated as a component of antigen 5 by affinity chromatography, and is specific only for the M. tuberculosis complex. It is the most extensively studied antigen. The 16-kDa antigen is an immunodominant antigen, frequently called 14 kDa, related to the family of low molecular weight heat-shock proteins. This antigen contains B-cell epitopes specific for the M. tuberculosis complex.

ELISA kits to detect the Mycobacterium tuberculosis virus antibody in mouse and other species are available for research uses. These kits should be useful to determine the M. tuberculosis antibodies due to natural infection or upon vaccination with BCG vaccine.

Related ELISA kits (http://www.4adi.com/commerce/ccc2728-tuberculosis-vaccine-elisa-and-reagents-tuberculosis-vaccine--elisa-reagents.htm)

990-100-THA	Human Anti-M. Tuberculosis IgA ELISA kit	990-110-THG	Human Anti- M.Tuberculosis IgG ELISA kit
990-120-THM	Human Anti- M.Tuberculosis IgM ELISA kit	990-210-TMG	Mouse Anti- M.Tuberculosis IgG ELISA kit
990-220-TMM	Mouse Anti- M.Tuberculosis IgM ELISA kit	990-230-06G	Mouse Anti-M. Tuberculosis 6kDa/ESAT-6 IgG
990-240-16G	Mouse Anti-M. Tuberculosis 16kDa/Hspx IgG ELISA	990-245-16M	Mouse Anti-M. Tuberculosis 16kDa/Hspx IgM
990-250-38G	Mouse Anti-M. Tuberculosis 38kda/Ag85b IgG ELISA	990-255-38M	Mouse Anti-M. Tuberculosis 38kda/Ag85b IgM
990-310-TRG	Rabbit Anti- M.Tuberculosis IgG ELISA kit	990-320-TRM	Rabbit Anti- M.Tuberculosis IgM ELISA kit
990-400-MTG	Monkey Tuberculosis antibody ELISA kit	990-205-TMA-flr	**Rev. 140724A**