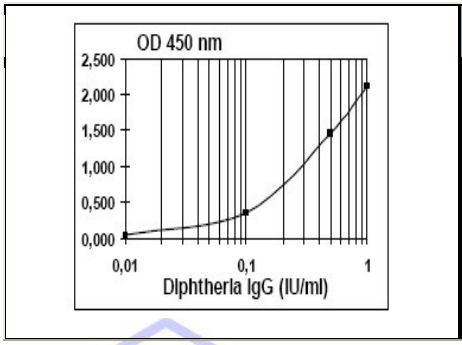
ALPHA DIAGNOSTIC INTERNATIONAL

Monkey Anti-CRM197 IgG ELISA Kit, Cat# 940-240-DKG

Monkey Anti-CRM197 IgG ELISA kit | Quantitative | **Standards 0-1.0 IU/ml** | **Sample**=100 ul (diluted); **110 min** assay



Monkey Anti-CRM197 IgG ELISA Kit Features

- CRM197antigen pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over 6-12 months.
- Convenient, stable, liquid standards: 0, 0.01, 0.10, 0.50, 1 IU/mL containing monkey anti- CRM197 IgG in a stabilizing buffer.
- 100ul samples diluted 1:101 or more; 110 min room temp assay
- Qualitative (-ve or +ve) or quantitative methods;
- Contains all necessary reagents. Stability ~12 months

This kit is for measuring anti-CRM197 IgG in monkey serum or plasma samples. For in vitro research use only.

Assay Procedure: Allow all reagents to reach room temperature. Arrange and label required number of strips.

Step 1. Pipet **100 ul each of pre-diluted standards**, samples (diluted 1:101 or more). Mix gently and incubate at room temp for **60 min.**
Step 2. **Aspirate and wash** 3X. **Add 100 ul of antibody-HRP** Conjugate to all wells, mix gently and incubate at room temp for **30 min.**
Step 3. **Aspirate and wash** 4X. Add **100 ul of TMB Substrate** solution to all wells, mix gently, and incubate at room temp for **20 min.**
Step 4. Pipet **100 ul of stop solution** into each well and mix gently (blue color turns yellow). **Measure absorbance at 450 nm**. Determine antibody concn in each sample using the calibrators (results are expressed as positive or negatives or in units/ml).

Interpretation of Results

< 0.1 IU/mL: Basic immunization recommended 0.1 - 1.0 IU/ml booster vaccination recommended
1.0 - 1.5 IU/ml to be boostered in 5 yrs 1.5 - 2.0 IU/ml to be boostered in 7 yrs > 2.0 IU/ml to be boostered in 10 years

Performance Characteristics

Intra-Assay-Precision:	4.9 %	Inter-Assay-Precision 3-7%	Clinical Sensitivity: 94 %
Analytical Sensitivity:	0.004 IU/mL	Cross-Reactivity: No significant cross-reactivities known	
Recovery 96 – 102 %	Linearity 78 – 133 %	Cross-Reactivity: No cross-reactivity to Clostridium tetani	
Interferences:	No interferences to bilirubin up to 0.3 mg/mL, hemoglobin up to 8.0 mg/mL und triglycerides up to 5.0 mg/mL		

General Information

Diphtheria (Greek *diphthera*)—"pair of leather scrolls") is an upper respiratory tract illness characterized by sore throat, low fever, and an adherent membrane (a pseudo membrane) on the tonsils, pharynx, and/or nasal cavity. A milder form of diphtheria can be restricted to the skin. It is caused by Corynebacterium diphtheriae, an aerobic Gram-positive bacterium. Diphtheria causes the progressive deterioration of myelin sheaths in the central and peripheral nervous system leading to degenerating motor control and loss of sensation. Diphtheria is a contagious disease spread by direct physical contact or breathing the aerosolized secretions of infected individuals. In the 1920s there were an estimated 100,000 to 200,000 cases of diphtheria per year in the USA, causing 13,000 to 15,000 deaths per year. Children represented a large majority of these cases and fatalities. Common diphtheria has largely been eradicated in industrialized nations through widespread vaccination. DPT (Diphtheria–Pertussis–Tetanus) vaccine is recommended for all school aged children. Boosters of the vaccine are recommended for adults since the benefits of the vaccine decrease with age without constant re-exposure; they are particularly recommended for those traveling to areas where the disease has not been eradicated. Diphtheria toxin consists of a single polypeptide. Proteolysis yields two fragments (A and B) which are held together by a disulfide bond. The toxin binds to EGF-like domain of Heparin-binding EGF-like growth factor (HB-EGF) through fragment B and is internalized with HB-EGF by receptor-mediated endocytosis. The low pH in the late endosomes induce pore formation by fragment B as well as catalyses the release of catalytic fragment A into the cytosol. Diphtheria toxin catalyzes the ADP-ribosylation of, and inactivates, the elongation factor eEF-2. In this way, it acts to inhibit translation during eukaryotic protein synthesis. The toxin enters the host cell and is hydrolysed by a trypsin-like protease to give a fragment with enzymatic activity. The toxin then transfers an ADP-ribose from NAD+ to a diphthamide residue, a modified histidine (amino acid), which is found within the EF-2 protein. EF-2 is needed for translocation of tRNA from the A-site to the P-site of the ribosome during translation. The ADP-ribosylation is reversible by administering high concentrations of nicotinamide, one of the reaction products.

There are several Diptheria vaccines available that can be used alone or in combination with other diseases (multivalent). It is often necessary to monitor the efficacy of vaccines and determine the anti-Diphtheria Ig levels in patients or for clinical trial using new formulation of vaccines. ADI's monkey Anti- CRM197 IgG ELISA kit is an immunoassay for the quantitative determination of IgG class antibodies against CRM197 in monkey serum and plasma. Diphtheria Vaccines: Pediarix (DTAP/HepB/IPV), Infanrix (DTAP), Boostrix (Tetanus, Diphtheria, Acellular Pertussis) – GlaxoSmithKline; Trihibit (DTAP/Hib), Daptacel (DTAP), Tripedia (DTAP), DT (Pediatric), Td (Adult), DecavacTM (tetanus/Diphtheria), Adacel (tetanus, Diphtheria, Acellular Pertussis) Sanofi Pasteur.

Related ELISA kits
940-110-DHM Human Anti-Diphtheria Toxoid IgM ELISA Kit; 940-200-DHG Human Anti-CRM197 IgG ELISA kit
Anti-Tetanus Toxoid, anti-B. Pertussis IgG, IgM (Human and Mouse) ELISA kits also available. rev. 100803JA

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