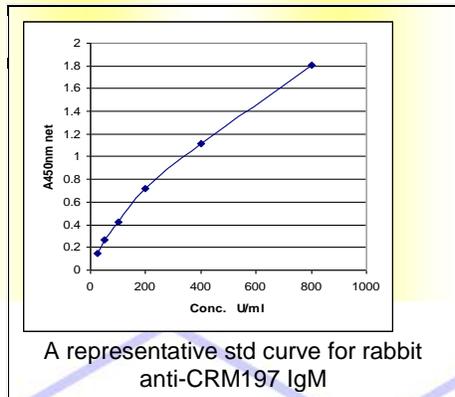


Rabbit Anti-CRM197 (Diphtheria Toxin CRM mutant) IgM ELISA Kit, Cat# 940-235-DRM
Rabbit Anti-CRM197 IgM ELISA kit | Quantitative | Sample=100 ul; 105 min assay



Rabbit Anti-Diphtheria Toxoid IgG ELISA Kit Features

- Diphtheria CRM197 antigen pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over 6-12 months.
- Convenient Positive Controls (500 u/ml) and Negative serum Controls for rabbit anti-CRM197 IgM.
- 100ul samples diluted 1:100 or more;
- 105 min room temp assay, 3 incubation steps,;
- Contains all necessary reagents. Stability ~12 months

This kit is for measuring anti-CRM197 (Diphtheria) IgM in Rabbit 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 1:100 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 **15 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 standards (results are expressed in units/ml).

Performance Characteristics

Negative sample= A450 values equal to less than the negative control; **Positive**= A450 values higher than the -ve values
Positive control has been arbitrarily assigned 500 U/ml. It can be serially diluted for measuring the anti-CRM197 IgM in units/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 diphtheria*, 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.

Diphtheria toxin consists of a single polypeptide of ~58 Kda. Proteolysis yields two fragments (A ~21 kda & B ~37 kda) 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 catalyzes 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. Mutants forms of Diphtheria toxin (DT) known as cross-reactive material (CRM 197). It is a non-toxic DT mutant containing a lesion (single amino acid substitution of Glu with Gly) in the A-chain blocking ADP-ribosylation. It is similar in antigenicity to DT or toxoid but without any toxin effects. It is for this reason CRM197 has been used a carrier protein in many vaccines.

There are several Diphtheria 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 rabbit Anti- Diphtheria Toxoid IgG ELISA kit is an immunoassay for the quantitative determination of IgG class antibodies against Diphtheria in human 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

Catalog#	ProdDescription		
940-100-DHG	Human Anti-Diphtheria Toxin/Toxoid IgG ELISA kit	940-110-DHM	Human Anti-Diphtheria Toxin/Toxoid IgM ELISA kit
940-120-DMG	Mouse Anti-Diphtheria Toxin/Toxoid IgG ELISA kit	940-125-DMM	Mouse Anti-Diphtheria Toxin/Toxoid IgM ELISA kit
940-130-DRG	Rabbit Anti-Diphtheria Toxin/Toxoid Ig's ELISA kit	940-135-DRM	Rabbit Anti-Diphtheria Toxin/Toxoid IgM ELISA kit
940-140-DGG	Guinea Pig Anti-Diphtheria Toxin/Toxoid IgG ELISA kit	940-145-DGM	Guinea Pig Anti-Diphtheria Toxin/Toxoid IgM ELISA kit
940-200-DHG	Human Anti-CRM197 IgG ELISA kit	940-210-DHM	Human Anti-CRM197 IgM ELISA kit
940-220-DMG	Mouse Anti-CRM197 IgG ELISA kit	940-225-DMM	Mouse Anti-CRM197 IgM ELISA kit
940-230-DRG	Rabbit Anti-CRM197 IgG ELISA kit	940-235-DRM	Rabbit Anti-CRM197 IgM ELISA kit
940-240-DKG	Monkey Anti-Diphtheria Toxin/Toxoid IgG ELISA kit	940-245-DKM	Monkey Anti-Diphtheria Toxin/Toxoid IgM ELISA kit
#VAC-DTX-200	VacciGel™ direct ELISA for the detection and measurement of Diphtheria Vaccine (Diphtheria Toxoid adsorbed onto the Adjuvaphos gel		
ELISA kits for measure Diphtheria Toxin/Toxoid, CRM197 (proteins) in biological buffers or Adsorbed on Alum are also available.			
Purified Diphtheria toxin, Toxoid, CRM197, polyclonal and monoclonal antibodies. Rev. 111103A			