CYTODIAGNOSTICS

PRODUCT SHEET

Mouse IgG ELISA Kit

Description

Cytodiagnostics Mouse IgG ELISA kit is a sensitive and accurate assay for the determination of mouse IgG levels produced in vivo and for assessing the level of immunoglobulin secretion by a hybridoma in vitro.

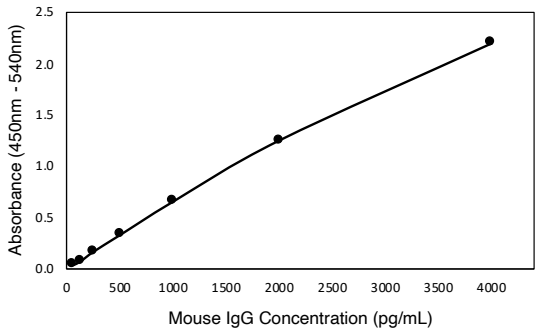
The discovery and development of hybridoma technology for the generation of monoclonal antibodies in mice by Georges Kohler and Cesar Milstein in 1975 has had a huge impact on basic research and modern medicine (Kohler & Milstein, 1975). As a result of this technology, it became possible to generate antibodies that are highly specific to their target and in large quantities. In 1986, muromonab-CD3 became the first mouse monoclonal antibody to be approved by the US Food and Drug Administration (FDA) for therapeutic use for the prevention of kidney transplant rejection (Lu et al., 2020). Recent decades have seen a large increase in the number of mouse monoclonal antibodies approved for use as therapeutics as well as reliable diagnostic tools in clinical pathology laboratories. This has created a need for a rapid and simple method for accurately quantifying mouse antibody production both in vitro (i.e., cell culture supernatant) and in vivo (i.e., serum, plasma, ascites).

Contents

Pre-coated Microplate (12 x 8 wells)	96 wells
10X Wash Buffer	50 mL
1X Sample Diluent	50 mL
1X Assay Diluent	50 mL
Mouse IgG Purified Protein, Lyophilized	1 vial
200X HRP-Detection Antibody conjugate	150 µL
1X One-step TMB Substrate	12 mL
1X Stop Solution	8 mL
Adhesive Plate Covers	1 count

Features

The Mouse IgG ELISA kit is based on the antibody sandwich principle. A microtiter plate coated with a capture antibody specific to mouse IgG Fc has been blocked and stabilized to create the solid phase of the assay. To perform the assay, samples, standards, and controls are added directly to the wells of the plate. After washing away unbound IgG, a Horse Radish Peroxidase (HRP) -conjugated Detection Antibody Solution is added and binds to the heavy and light chains of the captured mouse IgG molecules that were immobilized by the capture antibody, completing the sandwich. The wells are washed and a tetramethylbenzidine (TMB) Substrate Solution is added. A blue colour develops in proportion to the amount of bound mouse IgG. The color development is stopped using Stop Solution, which turns the blue end product yellow and the optical density (OD) of the yellow product is measured at 450 nm on a microtiter plate reader. See manual for more information on the assay procedure.



Characteristics

Protein name	Mouse IgG
Species reactivity	Mouse
Assay format	Solid-phase Sandwich ELISA (quantitative)
Sample type	Serum, Plasma, Cell culture supernatant
Sample volume	100 µL
Assay length	3.5 hrs
Analytical sensitivity	<20 pg/mL
Assay range	62.5 – 4000 pg/mL
Intra-assay CV%	<5%
Inter-assay CV%	<9%
Spike Recovery%	100.1% (Serum) 89.8% (Plasma) 101.4% (Hybridoma cell culture media)
Detection & Instrument	Colorimetric, Microplate Reader

Validation

Each manufactured lot of this ELISA kit is quality tested for criteria such as sensitivity, specificity, precision, and lot-to-lot consistency. See manual for more information on validation.

Storage

This product should be stored at 4°C. Do not freeze. If stored as specified, the ELISA Plates and reagents are stable for 12 months.

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Precautions and Disclaimer

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Please consult the Material Safety Data Sheet available online at www.cytodiagnostics.com for information regarding hazards and safe handling procedures.

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