

Hycult biotechnology

CHICKEN IgY ELISA Kit

Catalog No. HK502

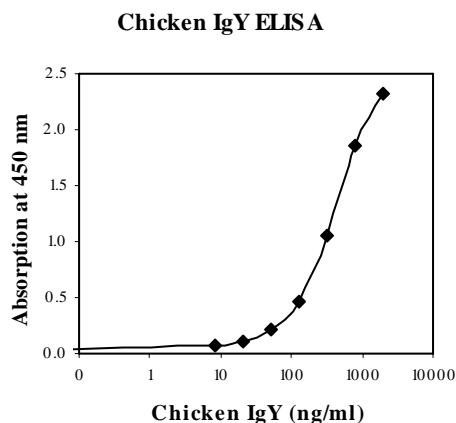
Quantity : 2 x 96 determinations

Description The yolk of eggs laid by immunized chickens has been recognized as an excellent source of polyclonal antibodies (pAb). Specific antibodies produced in chickens offer several important advantages over producing antibodies in other mammals. Because a single egg contains as much antibody as an average bleed from a rabbit, this simple, non-invasive approach presents an appealing alternative to conventional pAb production methods. Purification of chicken egg yolk immunoglobulin Y (IgY), the 150 kDa IgG homolog, does not require animal bleeding. In addition, the eggs from immunized chickens provide a continual, daily source of pAb, and this convenient approach offers greater compatibility with animal protection regulations. Due to the phylogenetic distance between birds and mammals, there is greater potential of producing a higher percentage of specific antibody against mammalian antigens when using chickens. Highly conserved mammalian proteins sometimes fail to illicit a humoral response in animals, such as rabbits, that are traditionally used for generating pAb. Non-specific binding and need for cross-species immunoabsorptions is eliminated since chicken IgY does not cross-react with mammalian IgG and does not bind bacterial or mammalian Fc receptors. There are well defined structural differences of IgY-type immunoglobulins and the IgG of mammals. That includes the molar mass of the heavy chains of the immunoglobulins. The IgY-type immunoglobulins are much less flexible than IgG. Also, the structures of the Fc part of the immunoglobulin isotypes IgY and IgG are different. Chickens have two low molecular-weight (MW) Igs referred to as IgY. The larger IgY has a sedimentation coefficient of 7.8S (MW 180 kDa, H chains 67 kDa) while the smaller is 5.7S (MW 130 kDa, H chains 37-42 kDa).

Application The chicken IgY ELISA has been developed for the quantitative measurement of natural and recombinant chicken IgY. The assay can be used to quantify chicken IgY during various purification steps of IgY and to quantify the concentration of IgY in egg.

- Features**
- Minimum concentration which can be measured is 8 ng/ml chicken IgY.
 - Measurable concentration range of 8-2000 ng/ml.
 - Working volume of 100 µl/well.

Typical standard curve



Cell Sciences®
Neponset Valley Tech Park
480 Neponset St., Bldg. 12A
Canton, MA 02021

Toll Free: 888 769-1246
Phone: 781 828-0610
Fax: 781 828-0542

E-mail: info@cellsciences.com
Web Site: www.cellsciences.com

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- Principle**
- The chicken IgY ELISA is a ready-to-use solid-phase enzyme-linked immunosorbent assay based on the sandwich principle with a working time of 3½ hours.
 - The efficient format of 2 plates with twelve disposable 8-well strips allows free choice of batch size for the assay.
 - Samples and standards are captured by a solid bound specific antibody.
 - Biotinylated tracer antibody will bind to captured chicken IgY.
 - Streptavidin-peroxidase conjugate will bind to the biotinylated tracer antibody.
 - Streptavidin-peroxidase conjugate will react with the substrate, tetramethylbenzidine (TMB).
 - The enzyme reaction is stopped by the addition of citric acid.
 - The absorbance at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorbance (linear) versus the corresponding concentrations of the chicken IgY standards (log).
 - The chicken IgY concentration of samples, which are run concurrently with the standards, can be determined from the standard curve.

Storage and stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least six months. After reconstitution the reagents are stable for 1 month if stored at 2-8°C.

Cross Reactivity Potential cross reacting proteins detected in the chicken IgY ELISA.

Cross reactant	Reactivity
Duck IgY	strong

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.

Also available

HK505	Duck IgY ELISA kit, 2 x 96 determinations
HL2010	Mouse mAb Isotyping kit, 10 tests
HL2020	Mouse mAb Isotyping kit, 20 tests

NOT FOR HUMAN USE. FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



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