

Product No. C-7295

Lot 046H4849

Monoclonal anti-Chicken IgG (γ -chain specific)

Mouse Ascites Fluid

Clone CG-106

Monoclonal Anti-Chicken IgG (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified Chicken IgG was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)* as a preservative.

Specificity

Monoclonal Anti-Chicken IgG is specific for the heavy chain (gamma, γ -chain) of chicken IgG from either serum or egg yolk. In studies done on immunoblots of denatured and reduced chicken IgG, the antibody localizes an epitope on the separated γ -chain. Using non-reduced, SDS-treated and heat-denatured chicken serum as an antigen in an immunoblot, the antibody shows specific staining of the intact IgG molecule. By the immunoblot technique the monoclonal antibody is found to have no cross reactivity with chicken IgM and weak cross reactivity with turkey IgG. Monoclonal Anti-Chicken IgG shows no cross reactivity with IgG from the following species: bovine, cat, cattle egret, crow, dog, dove, duck, goat, goose, guinea pig, hamster, human, horse, monkey (baboon, gibbon, rhesus), mouse, ostrich, pig, rabbit, rat, or sheep.

Because this clone is specific for an epitope on the γ -chain of chicken IgG, this antibody can be used in conjunction with Mouse Monoclonal Anti-Chicken Light Chains, Clone CH-31 (Sigma Product No. C-7910). These two antibodies may serve as specific instruments in the studies of the immunoglobulin genes of chicken light and heavy chains.

Description

Three immunoglobulin classes have been identified in the chicken; IgG (or IgY), IgM and IgA. The immune response of chickens and chicken antibodies has been studied and used extensively because of the chicken's importance as a food source. Moreover, due to the greater evolutionary difference between mammals and the chicken, antibodies produced in chicken against mammalian antigens are directed against more antigenic

determinants than the corresponding antibodies produced in other mammals. It is just recently that antibodies produced in chicken have become a valuable alternative to antibodies raised in other animal species. Polyclonal antibodies to chicken IgG may suffer from a lack of species specificity. Thus, in many instances such antibodies will also recognize non-related immunoglobulins that appear in the sample being tested, resulting in increased levels of background staining and false positives. To resolve this, an extensive adsorbing stage must be incorporated into the manufacturing process.

Uses

Monoclonal Anti-Chicken IgG (γ -chain specific) may be used for detection and localization of chicken serum or egg yolk IgG using a variety of immunological techniques. This reagent may serve as a highly specific instrument in poultry research and diagnostics as well as in the field of plant viruses which frequently uses the chicken as a host for antibody production.

Titer: 1:6,000

The antibody titer was determined by a direct ELISA using 10 μ g/ml of chicken IgG as the antigen coat.

In order to obtain best results, it is recommended that each individual user determine their working dilution by titration assay.

Storage

For continuous use, store at 2-8°C. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Sigma warrants that its products conform to the information contained in this and other Sigma products. Purchaser must determine the suitability of the products for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale dated 05/96.