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Catalog: ab-94-181 (chicken anti Rituximab idiotype)

Description: Chicken polyclonal anti-Rituximab idiotype (IgY)

Lot: 21-01-194A

Product:

Target:
Host species:
Chicken
Volume:
100µl
Concentration:
1mg/ml
Total protein:
100µg

Formulation: PBS, with 0.02% NaN₃, pH7

Production:

Affinity purified over Rituximab resin, and then depleted using human IgG resin to remove all non antiidiotype reactivity. Specificity tested by comparing binding to Rituximab vs human IgG1 (Figure 1 below).

Isotype:

Chicken IgY

Applications:

ELISA capture, blocking.

Binding of chicken anti-Rituximab idiotype to Rituximab vs human IgG1

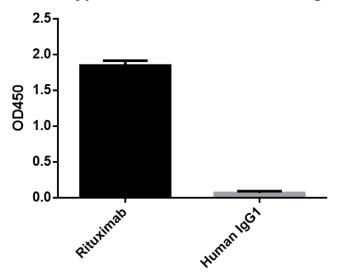
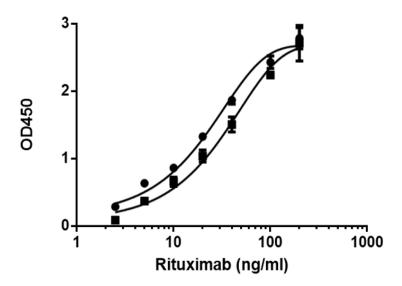


Figure 1, Binding of anti-Rituximab is only to the idiotype and not the whole IgG molecule. Anti-Rituximab idiotype was tested for binding to Rituximab and human IgG1 by indirect ELISA. Rituximab or human IgG1 was coated onto ELISA plates at equivalent concentrations and blocked using 2% BSA in PBS. Chicken anti-Rituximab idiotype was diluted to 0.25ug/ml and applied in triplicate to the coated wells and incubated for 1 hour at room temperature. After washing the wells, peroxidase conjugated detection antibody (Rabbit anti chicken IgY) was applied to the wells at a concentration of 5ng/ml and incubated for 1 hour at room temperature. After a final wash, the wells were developed with TMB and absorbance at 450nm was measured. These results show that the anti-Rituximab idiotype antibody is strongly specific to the Rituximab binding site (idiotype), and has negligible binding to the conserved regions of the IgG1 protein.

Comparing chicken anti-Rituximab idiotype to monoclonal anti-Rituximab idiotype in Rituximab sandwich ELISA.



- Chicken anti-Rituximab idiotype
- Monoclonal anti-Rituximab idiotype (Clone 10C5)

Figure 2. Comparison of a chicken anti-Rituximab idiotype and monoclonal anti-Rituximab idiotype (Clone 10C5) for use in Rituximab capture ELISA. Each antibody (chicken anti-Rituximab idiotype vs. monoclonal antibody 10C5) was coated onto polystyrene ELISA plates at equivalent concentrations for comparison in a Rituximab capture ELISA. Rituximab was spiked into human serum at concentrations from 200ng/ml down to 2.5ng/ml and applied to each ELISA plate in duplicate and incubated for 1 hour at room temperature. After washing, peroxidase conjugated detection antibody (anti-human IgG1) was applied to the wells at a concentration of 650pg/ml and incubated for 1 hour at room temperature. After a final wash, the wells were developed with TMB and absorbance at 450nm was measured. These results show that the chicken anti-Rituximab idiotype antibody performs better as a capture antibody than the competing monoclonal antibody (10C5) and provides a lower limit of detection.