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Universal sandwich ELISA for investigating the binding of Protein-LA (SpLA) to avian immunoglobulins using a peroxidase-labeled -anti-IgY conjugate.

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1 Works for me dx.doi.org/10.17504/protocols.io.bjq2kmye

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MATERIALS

NAME	CATALOG #	VENDOR
Anti-Chicken IgY, HRP Conjugate, 300ul	G1351	Promega
Nunc™ 96-Well Polystyrene Round Bottom Microwell Plates, V 96 well plate, Non-Treated, clear, without lid, Sterile	260210	Thermo Fisher
Staphylococcal Protein-A		Sigma Aldrich
Protein-L from P. Magnus		

1 This ELISA is used to study the interaction of protein-LA (SpLA) with diverse avian immunoglobulins.

2 The 96 well microtitre plate is coated overnight at 4°C with 2 µg/µl per well of recombinant SpLA or a mixture of SpA with SpL in carbonate-bicarbonate buffer pH 9.6.

3 Then plate is treated with bovine serum albumin solution and washed 4X with PBS-Tween.

4 50 µl of avian egg yolk or egg white (1 mg/ml) is added and incubated for 1.30h at RT and the microplate is then rewashed 4X with PBS-Tween.

5 Then 50 µl of peroxidase-labeled-anti-IgY conjugate diluted 1:15000 in PBS-non-fat milk is added to each well and incubated for 1.30h at RT. After that the plate is washed 4X with PBS-Tween.

6 Pipette 50 µl of 3,3',5,5' - tetramethylbenzidine (TMB; Sigma-Aldrich) to each well.

7 The reaction is stopped with 50 µl of 3M H_2SO_4 solution.

8 The plate is visually assessed for the development of colour and read in a microplate reader at 450 nm.

9 A cut-off point can be calculated as the mean of the optical density of negative controls x 3. The higher the OD value the higher will be the binding affinity of SpLA to avian immunoglobulins.

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