Datasheet for 200-4133

OVALBUMIN Antibody

Overview

Description:	Anti-Ovalbumin (Hen Egg White) (RABBIT) Antibody (BULK ORDER) - 200-4133
Item No.:	200-4133
Size:	50 mg
Applications:	ELISA, WB, Biochemical Assay, IHC
Reactivity:	Chicken
Host Species:	Rabbit

Product Details

Background:	Anti-Ovalbumin Antibody recognizes ovalbumin that is the main protein found in egg white. Ovalbumin makes up 55-65% of the total protein. Ovalbumin displays sequence and three-dimensional homology to the serpin superfamily, but unlike most serpins, it does not undergo a conformational change upon proteolytic cleavage and is not a serine protease inhibitor. The function of ovalbumin is still unknown, although it is presumed to be a storage protein for tissue-specific, steroid hormone-induced gene expression. Ovalbumin is the second most common food allergen in infants and is widely used as an antigen to induce IgE-mediated food allergy animal models, allergic asthma models, and atopic dermatitis models. OVA was used as a model antigen to study the efficacy of cancer vaccines using nanoparticles, where OVA (instead of a tumor antigen) provides a convenient method to evaluate B-cell response. Ovalbumin is a key protein for biochemical investigations, processes, allergen disease models, and vaccine studies. It can be used as a control, blocking reagent, or antibody in assays such as ELISA, SDS-PAGE, IHC, Western Blot, and size exclusion chromatography.
Synonyms:	rabbit anti-Ovalbumin Antibody, Anti-OVA, Egg albumin antibody, Plakalbumin, Allergen Gal d II, Allergen Gal d 2, Hen Egg White
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SERPINB14

Reactivity:	Chicken
Immunogen Type:	Native Protein
Immunogen:	Ovalbumin [Hen Egg White]
Purity/Specificity:	Rabbit Anti-Ovalbumin Antibody is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum as well as purified and partially purified Ovalbumin [Hen Egg White]. Cross reactivity against Ovalbumin from other sources is unknown.
Relevant Links:	• UniProtKB - P01012 • NCBI - P01012.2 • GeneID - 396058

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	Biochemical Assay, IHC (Based on references)
Application Note:	Anti-Ovalbumin Antibody has been tested in ELISA and Western Blot. This product can be useful in assays such as IHC and IP. Specific conditions for reactivity and signal detection should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:25,000
IHC:	1:300 - 1:2,000
IP:	1:100
WB:	1:500 - 1:2,000

Formulation

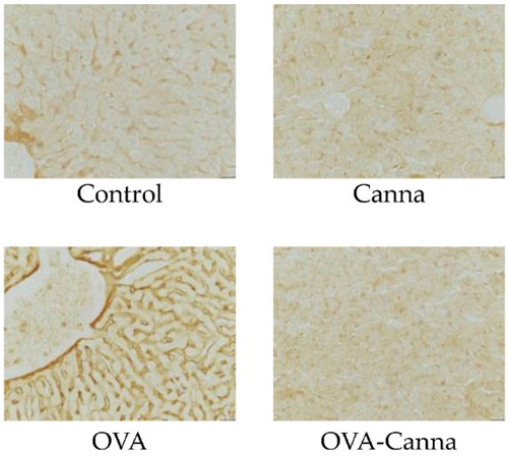
Physical State:	Lyophilized
Concentration:	10.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Reconstitution Volume:	5.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

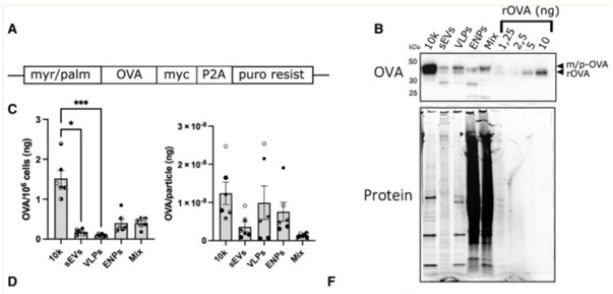
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

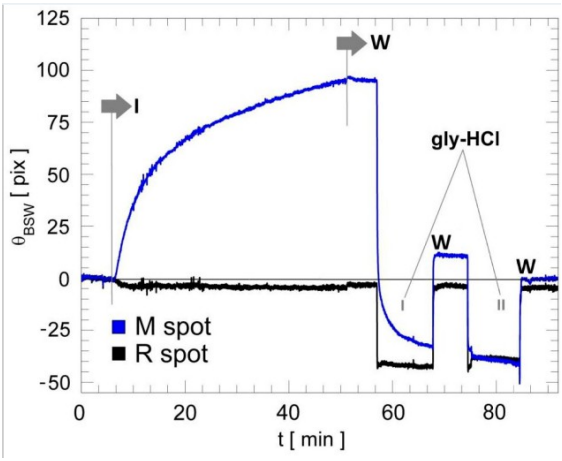


Immunohistochemistry
Immunohistochemical Analysis Using Anti-Ovalbumin Antibody. After the evaluation of anaphylactic symptoms on day 28, the liver was collected, fixed, and used to prepare frozen sections. The samples were incubated overnight with a primary rabbit polyclonal ovalbumin antibody (p/n 200-401-033). The images are representative of each group. Immunohistochemical staining of liver sections was used to determine the effects of canna starch on OVA localization (400×). Fig 2. PMID: 38397452.



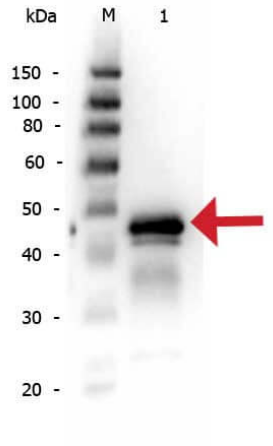
Western Blot

Cross-presentation of OVA antigen carried by the subtypes of particles.
(A) Scheme of the construct containing the myristoylation and palmitoylation sequences fused to OVA, myc tag, P2A cleavage site and puromycin resistance gene for selection, which was used to create the EO771 myr/palm-OVA stable cells.
(B) Analysis of EVs/ENPs from 20 × 106 EO771-m/p-OVA by western Blot. Four known amounts of recombinant OVA were loaded on the same gel to allow quantification of OVA. Blots were revealed with a polyclonal antibody against OVA. One representative blot out of 6. Arrowheads indicate the positions of myr/palm-OVA (upper band) and recombinant OVA (lower band).
(C) Quantification of OVA in the different EVs/ENPs, was done on the western blot images as compared to the OVA dose–response curve. Graphs show ng OVA/106 cells (left) or ng OVA/particles (right). Friedman test with Dunn's multiple comparison was performed. n = 6.
Figure 6. PMID: 38073509

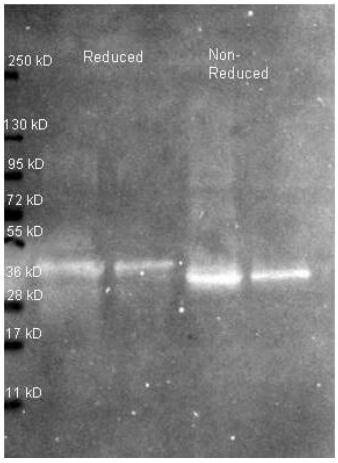


Figure

Sensograms of two spots in response to an Anti-IgG injection and two regeneration steps in sequence. The two sensograms correspond to the reference spot with anti-ovalbumin antibody (R, black curve) and the signal spot with human IgG antibody (M, blue curve). Then 10 min regeneration steps are performed to recover the starting conditions (before Anti-IgG injection, I marker). W indicates the washing steps. Fig 4. PMID: 30044392



Western Blot
Western Blot of Rabbit anti-OVALBUMIN (Hen Egg White) antibody. Lane 1: Reduced Ovalbumin. Load: 50 ng. Primary antibody: Ovalbumin antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) for 30 min at RT. Predicted/Observed size: 45 kDa, 45 kDa for Ovalbumin.



Western Blot
Western Blot of Rabbit anti-Ovalbumin antibody. Lane 1: Ovalbumin protein - Reduced [~1 µg]. Lane 2: Ovalbumin protein - Reduced [0.25 µg]. Lane 3: Ovalbumin protein - Non-reduced [~1 µg]. Lane 4: Ovalbumin protein - Non-reduced [0.25 µg]. Primary antibody: Ovalbumin antibody at 1:5000 for overnight at 4°C. Secondary antibody: Atto 425 conjugated goat anti-rabbit secondary antibody at 1:10,000 for 1.5 hr at RT. Block: MB-070 buffer overnight at 4°C. Predicted/Observed size: 42.9 kDa, ~36 kDa for ovalbumin. Other band(s): none.

References

- Koida A et al. Canna Starch Improves Intestinal Barrier Function, Inhibits Allergen Uptake, and Suppresses Anaphylactic Symptoms in Ovalbumin-Induced Food Allergy in Mice. *Biomolecules.* (2024)
- Cocozza F et al. Extracellular vesicles and co-isolated endogenous retroviruses from murine cancer cells differentially affect dendritic cells. *EMBO J.* (2023)
- Sinibaldi A et al. Label-free monitoring of human IgG/anti-IgG recognition using bloch surface waves on 1D photonic crystals. *Biosensors (Basel).* (2018)
- Dufresne-Martin G et al. Peptide mass fingerprinting by matrix-assisted laser desorption ionization mass spectrometry of proteins detected by immunostaining on nitrocellulose. *Proteomics.* (2005)
- Kathryn L Brogan et al. Influence of antibody immobilization strategy on molecular recognition force microscopy measurements. *Langmuir.* (2005)

Disclaimer

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