

Product Specification Sheet

Ovalbumin (Gal D2, OVA 323-339) Peptide and Antibodies

<input type="checkbox"/> Cat. # OVA3231-S	Rabbit Anti-Chicken egg ovalbumin (OVA 323-339) peptide antiserum	SIZE: 100 ul
<input type="checkbox"/> Cat. # OVA3231-A	Rabbit Anti-Chicken egg ovalbumin (OVA 323-339) peptide IgG, aff pure	SIZE: 100 ul
<input type="checkbox"/> Cat. # OVA3231-P	Chicken egg ovalbumin (OVA 323-339) peptide Control/blocking peptide	SIZE: 100 ug

Chicken egg albumin (Ovalbumin) is the major protein constituent of egg whites. Chicken egg albumin is a phosphorylated-glycoprotein. From the amino acid sequence, the peptide portion of the molecule consists of 385 residues and has a molecular weight of 42.7 kDa. This sequence completely agrees with the reported m-RNA (messenger RNA) sequence. The carbohydrate and phosphate portions account for an additional 1428 and 160 grams per mole respectively, giving a total molecular weight of 44.3 kDa. Differential scanning calorimetry indicates the chicken egg albumin denatures at 84 °C. Ovalbumin can be used as a carrier protein to conjugate to synthetic peptides for use as an immunogen. It has the following amino acids: 20 Lys, 10 Tyr, 6 Cys, 14 Asp, and 33 Glu which make it suitable for conjugation.

Ovalbumin (OVA) is widely used in allergy research. OVA peptide 323-339 has been reported to be responsible for 25–35% of isolated BALB/c mouse T-cell response to intact OVA. Several ovalbumin (OVA) peptides (OVA257-264, class I (Kb)-restricted peptide epitope; OVA323-339, An H-2b-restricted OVA class II epitope 4) have been used for studies of IgE response, CD4 T cells response, immediate cutaneous hypersensitivity and airways responsiveness (AR). OVA 323-339 induced similar lung inflammation. Interestingly, significant serum total IgE and OVA-specific IgE were observed in OVA mice when compared to saline control. OVA 323-339 mice showed higher serum OVA-specific IgE, OVA 323-339-specific IgE, IL-4 and lower IFN-γ similar to OVA mice. The proliferative response to OVA was found in cultured splenocytes of both OVA and OVA 323-339 mice, while the similar proliferative response to OVA 323-339 was only observed in the splenocytes of OVA 323-339-sensitized and challenged mice. Although OVA 323-339 induced a Th2-like response in the mouse model as did OVA, OVA 323-339 has clearly limited immunogenic potency to activate OVA-sensitized and challenged mice splenocytes, unlike OVA.

Source of Antigen and Antibodies

Antigen	17-aa peptides of Chicken egg ovalbumin peptide (323-339aa; ISQAVHAHAHAEINEAGR; designated OVA3231-P or control peptide) conjugated to KLH
Ab Host/type	Rabbit, polyclonal antiserum (#OVA3231-S) or Aff pure IgG (cat # OVA3231-A) purified over the antigen column
2-ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
 Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
 Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
 Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1000-1:5000 for antiserum and 1:500-1:2000 for aff pure for affinity pure IgG using Chemiluminescence technique).

ELISA (1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: We recommend the use of affinity pure antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

OVA3231-S recognizes native chicken egg ovalbumin protein (#OVA12-R) or the peptide (#-OVA3231-P) with high efficiency. The OVA3231-P control peptides, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity. Ovalbumin protein (OVA12-R) can be used as positive control for ELISA or Western.

References: Burleson SCM (2011) *Am. J. Respir. Crit. Care Med.*, 183: A2878, Sun LZ (2010) 71, 329-335; Sung SJ (2001) *J. Immunol.* 166, 1261-1271, Mine Y (2003) *Prot. Eng.* 16, 747-752

**This product is for In vitro research use only.*

Related materials available from ADI

SP-51023-1 OVA (323-339) peptide
 SP-53698-1 Ovalbumin (257-264) antigen peptide
 SP-70422-1 OVA Peptide

600-100-OGG Mouse Anti-Ovalbumin Ig's ELISA Kit

OVA3231-S-Rabbit-Anti-OVA323-339-Antibodies 160406V

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