

EndoGrade[®] Ovalbumin

Endotoxin-free Ovalbumin

Avoiding endotoxin artefacts and facilitating undisturbed allergology research and immunization experiments



Introduction

Ovalbumin is one of the most extensively studied proteins in animal models and also an established model allergen for airway hyper-responsiveness (AHR). Ovalbumin is a glycoprotein and the main constituent of chicken egg white.

Commercially available ovalbumin is commonly contaminated with endotoxins (lipopolysaccharides/LPS) and can fully activate endothelial cells in an *in vitro* assay of the first step of inflammation. LPS is a potent and pleiotropic inflammatory agent. Therefore, LPS contaminations falsify research results in allergology research and immunization experiments. The threshold LPS level for intravenous administration of pharmaceuticals was set to 5 EU/kg bodyweight.

To meet the exact requirements of *in vivo* (e.g. injection, aerosolization) and *in vitro* (e.g. proliferation assays) studies based on ovalbumin, LIONEX provides EndoGrade[®] Ovalbumin at superior quality.

Specifications of EndoGrade[®] Ovalbumin

Source	Chicken egg white
Synonyms	Plakalbumin, Allergen Gal d 2, Gal d II
Preparation	Prepared from egg white by ion exchange, crystallization and subjected to pH 4.6 during manufacturing
Purity (SDS-Page)	> 98%
Endotoxin level	< 0.1 EU/mg*
Microbiological contamination	< 10 cfu/mg
Molecular weight	~45 kDa
Extinction coefficient	0.7 ml mg ⁻¹ cm ⁻¹
Max. solubility in water	20 mg/ml
CAS number	9006-59-1
Form	Lyophilized, salt-free
Storage / Shelf life	Lyophilized EndoGrade [®] Ovalbumin is stable until the stated expiry date if stored at 2-8 °C. Reconstituted EndoGrade [®] Ovalbumin is stable for 6 months if stored at -20 °C.

*measured in 1 mg/ml ovalbumin; 0.1 EU ≈ 0.01 ng LPS

Precautions and Disclaimer

- **For laboratory & research use only. Not for drug, household or other uses.**
- Prepare solvent (e.g. H₂O, PBS) from endotoxin-free water and endotoxin-free materials. **Endotoxin-free EndoGrade[®] Water** and **EndoGrade[®] Glass Test Tubes** are supplied by LIONEX.
- All materials used, such as containers, pipette tips and solvents, must be endotoxin-free. Glassware is preferred, as endotoxins can be destroyed by heat treatment (200 °C, 4 h or 250 °C, 1 h). Plastic materials should be depyrogenated in at least 1 M NaOH overnight (6-12 h), subsequently washed with endotoxin-free water and air-dried.
- **The EndoGrade[®] vials are sealed under vacuum; open the plug slowly to avoid dispersion.**
- Avoid contact with the plug during reconstitution. Transfer reconstituted ovalbumin into a new endotoxin-free container; be careful when opening the container to avoid cross-contamination.
- Mix gently to solve the ovalbumin and avoid bubbles. Reconstituted ovalbumin should be used immediately. It is recommended to quick-freeze reconstituted ovalbumin for storage (-20 °C) and use it within 6 months.
- During storage, fibrous aggregates can occur in the ovalbumin solution. These do not influence the product quality. They can be removed by centrifugation or filtration (0.2 µm sterile filter).

Examples for Dilution/Reconstitution

Depending on the desired application (e.g. injection, aerosolization or proliferation assay), reconstitute lyophilized ovalbumin in the corresponding solvent volume.

Ovalbumin	Solvent volume	Concentration
25 mg	2.5 ml	1.0% (w/v)
25 mg	5.0 ml	0.5% (w/v)
25 mg	10.0 ml	0.25% (w/v)
1 g	100 ml	1.0% (w/v)

Package Content (Cat. No. LET0027, LET0028, LET0029)

EndoGrade® Ovalbumin, lyophilized, salt-free

Storage

Store at 2-8 °C (lyophilized) or -20 °C (reconstituted in solvent).

Inquiries and Technical Support

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Endotoxin-free Portfolio Enlargement

Do you have suggestions for further endotoxin-free products (e.g. further allergens, proteins) which should be included in LIONEX' EndoGrade® portfolio? Please send your suggestions to info@lionex.de.

Required Material

- Endotoxin-free solvents such as **EndoGrade® Water**
- Endotoxin-free containers such as **EndoGrade® Glass Test Tubes**

Related Products by LIONEX

EndoGrade® Endotoxin-free Accessories

- **EndoGrade® Water** - Ultra-pure water for endotoxin-free reconstitution and dilution of reagents
- **EndoGrade® Glass Test Tubes** - Endotoxin-free borosilicate glass test tubes with screw cap

EndoTrap® Endotoxin Removal System

- **EndoTrap® HD** - Endotoxin-specific affinity chromatography for research and biomanufacturing
- **EndoTrap® red** - Endotoxin-specific affinity chromatography for phosphate and chelator buffers

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