

# EndoGrade<sup>®</sup> 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<sup>®</sup> Ovalbumin at superior quality.

### Specifications of EndoGrade<sup>®</sup> 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 <sup>-1</sup> cm <sup>-1</sup>
Max. solubility in water	20 mg/ml
CAS number	9006-59-1
Form	Lyophilized, salt-free
Storage / Shelf life	Lyophilized EndoGrade <sup>®</sup> Ovalbumin is stable until the stated expiry date if stored at 2-8 °C. Reconstituted EndoGrade <sup>®</sup> 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. H<sub>2</sub>O, PBS) from endotoxin-free water and endotoxin-free materials. **Endotoxin-free EndoGrade<sup>®</sup> Water** and **EndoGrade<sup>®</sup> 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<sup>®</sup> 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](mailto: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

## Legal Statements

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