

Ovalbumin

Product Information

Cat.number : R5851A, 1g R5851B, 5g. R5851C, 10g. R5851D, 25g.

Product : **OVALBUMIN** from Egg White, Biotech grade
Synonyms: **Albumin from hen egg white**, L-Ovalbumin

MW: 44287 Da (calculated) ; CAS Number: 9006-59-1

Lyophilized powder, >98% pure, biotech grade
Total Nitrogen 13.7 to 15.0 % (on anh.substance) | Water < 12.0 %

Storage: Store at +4°C (or -20°C for long term) (M)
Stability exceed 1 year (has been shown stable up 3 years)
Warm to room temperature before opening.

Technical information

Ovalbumine is a phosphorylated glycoprotein purified from chicken egg (major constituent) which is useful as a marker (~45 kDa) for protein electrophoresis, as carrier for the preparation of antigen-conjugates (immunogen, or for testing immune sera raised to antigen-BSA conjugate), and several other control or applications.

Structure and properties:

- Ovalbumin is a **glycoprotein** found in egg white (60-65% of the total protein).
- It consists of a polypeptide with a side chain of mannose and glucosamine residues and up to two phosphate groups.
- It displays homology to the serpin superfamily, but is non-inhibitory serpin of fibrinolysis and coagulation. Its function is unknown, although it is presumed to be a storage protein.
- It has a molecular weight of 44287 Da according calculation based on aa content.
- In electrophoresis ovalbumin appears as a 45 000 Da component and is isoelectric at pH 4.6 but there are three components in the crystalline preparation. It appears that this electrophoretic separation is due to differences in the phosphorus content of ovalbumin, the main component having two atoms of phosphorus/mole protein, the second, one atom, and the third minor fraction no phosphorus ([Perlmann 1952](#), [Linderstrom-Lang 1947](#)).
- [Nichol 1985](#) reports a study of the shape of the ovalbumin molecule. See review by [Warner 1955](#). There is a C-terminal amino acid residue (proline) ([Niu 1955](#)), and the N-terminal sequence was found to be: N-acetyl-Gly-Ser-Gly-Leu-Ala ([Narita 1962](#)). There is one disulfide bond ([Warner 1954](#)).
- The carbohydrate is linked to the protein through an aspartic acid carboxyl group and were able to purify the glycopeptides ([Nuenke 1961](#)). Data indicates that the prosthetic group contains five mannoses and three acetylglucosamine residues attached to aspartic acid at the glucosamine ([Bogdanov 1962](#)).
- Ovalbumin denatures at 84 °C.
- Ovalbumin is soluble up 50mg/ml in water, giving a clear or yellowish solution.

Applications:

- Ovalbumin is used as a **molecular weight marker** (~45 kDa) in protein electrophoresis.
- Ovalbumin is used as a **carrier protein** to prepare immunoconjugates with peptides that are injected to animals for immunization (taking to good account ovalbumin's immunogenic property), or more often as a **control carrier in immunoassays** to monitor the immunization obtained with haptens conjugated to HLH or BSA, notably to discriminate anti carrier antibodies.
- It is also used in other assays and applications, also as control protein, irrelevant protein,...

FT-R5851B

Literature

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- MaxiBind OVA, a cationized ovalbumin designed for enhanced conjugations, Maleimidyl-OVA #23066A
- Saturating agents for immunoassays (i.e. [SeaBlock](#))

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