

Introduction

Recombinant Protein-A used also in Adar's Protein A beads (Cat 1016) is a genetically engineered form of Protein-A derived from *Staphylococcus aureus*. Non-essential regions have been modified while leaving the IgG binding sites intact.

Protein A is been used extensively used for the isolation of IgG from several species of mammals. The affinity of Protein A to IgG's is different between species and IgG subclasses within a given species. A major known limitation of protein A is its weak binding to Mouse IgG1– a major immunoglobulin subclass in Mice. Despite its variable binding characteristics, Protein A is a popular choice for both antibodies binding in various assays and when coupled to beads, for Immunoprecipitation of antibody-antigen complexes. Protein A binds specifically the F_c region of immunoglobulins leaving the F_{ab} region free for binding the antigen. Hence, Protein A is extremely useful for isolating of immune complexes.

Protein A Beads characteristics

Source: recombinant protein, Molecular Weight 23.3 kd expressed in *E. coli*

Purity: > 90% by SDS-PAGE.

Spectroscopic analysis: OD_{280nm}/250nm=2.51

LAL Pyrogenicity: < 0.5 EU/mg Recombinant Protein A

Composition: Lyophilized white Powder. 10.9mg Recombinant Protein A, 0.82 mg phosphate buffer salts.

Storage before reconstitution: Store at 4°C. Product is stable under these conditions for two years.

Reconstitution: Reconstitution per 10 mg vial with 0.48 mL of deionized water will give a solution containing 22.1 mg/ml Recombinant Protein A in 10 mM Phosphate buffer, pH 7.4

Storage after reconstitution: Store at 4°C in PBS pH 7.4 added with NaN₃ 0.1% (w/v) as a preservative. Product is stable under these conditions for 1 month. Alternatively, Prepare small aliquots and store at -20°C for up to two years. Avoid repeated freezing and thawing cycles.