

GENERAL DESCRIPTION

DESCRIPTION

Protein A is a cell wall component of *Staphylococcus aureus*. It consists of a single polypeptide chain shaped as a cylinder, which contains five antibody-binding domains. These high affinity regions are specifically bonded to Fc region of the immunoglobulins (specially IgGs of different species).

Protein A is temperature stable and it retains its native conformation even in the presence of denaturing agents. Protein A resins have been widely used to purify a wide range of immunoglobulins of different mammalian species and also to purify certain IgG subclasses that have no affinity.

RELATIVE AFFINITY OF IMMOBILIZED PROTEIN A FOR VARIOUS SPECIES AND SUBCLASSES OF POLYCLONAL AND MONOCLONAL IgGs⁽¹⁾

SPECIES / SUBCLASS	PROTEIN A	SPECIES / SUBCLASS	PROTEIN A
<i>Monoclonal</i>		<i>Polyclonal</i>	
Human		Rabbit	++++
IgG ₁	++++	Cow	++
IgG ₂	++++	Horse	++
IgG ₃	—	Goat	-
IgG ₄	++++	Guinea pig	++++
Mouse		Sheep	+/-
IgG ₁	+	Pig	+++
IgG _{2a}	++++	Rat	+/-
IgG _{2b}	+++	Mouse	++
IgG ₃	++	Chicken	---
Rat		Human IgG	++++
IgG ₁	—	Human IgM	---
IgG _{2a}	—	Human IgD	---
IgG _{2b}	—	Human IgA	---
IgG _{2c}	+		

⁽¹⁾Harlow, E. And Lane, D. eds. (1988). Antibodies, A. Laboratory Manual. Cold Spring Harbor Laboratory, N.Y., 617-618.

ABT offers ¹²⁵I-Protein A products with competitive advantages compared to market standards:

- High IgG-binding capacity resin (around 25 mg human IgG / ml).
- Milder elution condition than Protein G resin.
- High stability binding of ¹²⁵I-Protein A: resin is reusable with no significant loss of binding capacity.

ABT offers different product formats:

- Test Kit
- Bulk Resins
- Pre-Packed Columns
- Protein A Rapid Run™ Cartridges