

Recombinant Alkalitolerant Protein A (Freeze-Dried)

Product description

Protein A is a cell wall component produced by several strains of *Staphylococcus aureus*. It consists of a single polypeptide chain and contains virtually no carbohydrates. This product is produced in *E. coli* and is functionally equivalent to natural Protein A. It is composed of five IgG-binding domains (E-D-A-B-C) arranged in tandem, exhibiting strong specific affinity for the Fc fragment of IgG. When coupled to a matrix as an affinity ligand, Protein A can specifically bind to antibody molecules in a sample while allowing other contaminating proteins to flow through, providing extremely high selectivity. It is commonly used for the purification of monoclonal or polyclonal antibodies. Protein A binds to human, mouse, and rat IgG subclasses (e.g., human IgG1, IgG2, IgG4; mouse IgG2a, IgG2b, IgG3; rat IgG2c), as well as total IgG from rabbits, guinea pigs, pigs, dogs, and cats.

Components

Name	20543ES10	20543ES60	20543ES74	20543ES80	20543ES92
Recombinant Alkalitolerant Protein A (Freeze-Dried)	10 mg	100 mg	400 mg	1 g	10 g

Specifications

Molecular Alias	Recombinant Protein A, alkali-tolerant
Source	<i>E. coli</i>
Molecular Weight	Approximately 26.7 kDa; a single non-glycosylated polypeptide chain containing 237 amino acids.
Amino Acid Sequence	AQGTVDKFDKEQQNAFYELHLPNLTEEQRNAFIQSLKDDPSQSANLLAEAKKLNDAPKVDKFDKEQQNAFYELHLPNLTEEQRNAFIQSLKDDPSQSANLLAEAKKLNDAPKVDKFDKEQQNAFYELHLPNLTEEQRNAFIQSLKDDPSQSANLLAEAKKLNDAPKVC
Concentration	4.4 mg/mL per 1.0 OD at 280 nm
Appearance	Sterile-filtered white lyophilized powder.
Tag	None
Purity	> 97% as determined by SDS-PAGE and HPLC analyses.
Endotoxin Level	< 0.1 EU per 1 µg of protein (determined by the LAL method).
Formulation	Supplied as a 0.2 µm filtered solution in 20 mM PB, 400 mM NaCl, pH 7.4, or lyophilized from a 0.2 µm filtered solution in 20 mM PB, 400 mM NaCl, pH 7.4.
Reconstitution	Dissolve in distilled water.

Storage

This product should be stored at -25~-15°C for one year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Notes

1. This product is for research use only.
2. Please operate with lab coats and disposable gloves, for your safety.

Appendix

Species		Protein A	Protein G	Protein L	Species		Protein A	Protein G	Protein L
	IgG	+++	+++	+++		IgG	+	++	-
	IgG1	++++	++++	++++	Sheep	IgG1	+	++	-
	IgG2	++++	++++	++++		IgG2	+++	+++	-
	IgG3	-	+++	+++	Dog		++	+	NT
	IgG4	++++	++++	++++	Pig		+++	++	+++
Human	IgA	+	-	+++		IgG	+	++	+++
	IgA1	+	-	+++		IgG1	-	+	+++
	IgA2	+	-	+++		IgG2a	-	++++	+++
	IgD	-	-	+++	Rat	IgG2b	-	++	+++
	IgE	++	-	+++		IgG2c	++	++	+++
	IgM	+	-	+++		IgG3	+	++	NT
Rabbit	IgG	+++	+++	+		IgG	++	++	+++
	IgG	+	+++	-		IgG1	+	++++	+++
Cow	IgG1	+	+++	-		IgG2a	++++	++++	+++
	IgG2	+++	+++	-	Mouse	IgG2b	+++	+++	+++
Cat	IgG	+++	+	NT		IgG3	++	+++	+++
Horse	IgG	++	++++	NT		IgM	-	-	+++
	IgG	+	++	-	Chicken	IgY	-	-	-
Goat	IgG1	+	+++	-	Monkey	IgG	++++	++++	NT
	IgG2	+++	+++	-	Hamster		+	++	+++
	IgG1	++	+	NT	Koala		-	+	NT
Guinea-pig	IgG2	++	+	NT	Llama		-	+	NT

Strong binding (+++), medium interaction (+), weak or no interaction (-), not tested (NT) .