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Binding characteristics of Protein A and Protein G

Protein A and G are bacterial proteins from *Staphylococcus aureus* and *Streptococcus*, respectively, which can be used for the specific purification of IgG. The binding of IgG occurs at the FC-part of the IgG and is depended on the IgG subtype.

The table below will help to decide which affinity support is best for your application.

Table: Binding characteristics of Protein A and Protein G

Human	Protein A	Protein G
IgA	-/+	-
IgD	-	-
IgE	-	-
IgG1	++	++
IgG2	++	++
IgG3	-	++
IgG4	++	++
IgM	-/+	-
IgE	-	-
Fab	-	-

Mouse	Protein A	Protein G
IgG1	-/+	+ / ++
IgG2a	++	++
IgG2b	++	++
IgG3	+	++
IgM	-	-

Rat	Protein A	Protein G
IgG1	-	+
IgG2a	-	++
IgG2b	-	-/+
IgG3	+	+
Guinea Pig	Protein A	Protein G
IgG1	++	-/+
IgG2	++	-/+
Rabbit	Protein A	Protein G
IgG	++	++
Chicken	Protein A	Protein G
IgY	-	-
Goat	Protein A	Protein G
IgG	-	++
Monkey	Protein A	Protein G
IgG	++	++
Cow	Protein A	Protein G
IgG	+	++
Sheep	Protein A	Protein G
IgG	+/-	++
Hamster	Protein A	Protein G
IgG	-/+	+
Horse	Protein A	Protein G
IgG	-/+	++

++ strong binding
 +/++ medium to strong binding
 + medium binding
 -/+ weak to medium binding (variable)
 - weak or no binding