

Binding characteristics of antibody-binding proteins: Protein A, Protein G, Protein A/G and Protein L

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Protein A, G, A/G and L are native and recombinant proteins of microbial origin that bind to mammalian immunoglobulins. Binding specificities and affinities of these proteins differ between source species and antibody subclass. Use the following table to select the antibody-binding protein that is best for your application. Consult the Thermo Scientific Pierce Product catalog or web site for more information and a listing of the many available products based on these proteins.

Species	Antibody Class	Protein A	Protein G	Protein A/G	Protein L†
Human	Total IgG	S	S	S	S†
	IgG ₁	S	S	S	S†
	IgG ₂	S	S	S	S†
	IgG ₃	W	S	S	S†
	IgG ₄	S	S	S	S†
	IgM	W	NB	W	S†
	IgD	NB	NB	NB	S†
	IgA	W	NB	W	S†
	Fab	W	W	W	S†
ScFv	W	NB	W	S†	
Mouse	Total IgG	S	S	S	S†
	IgM	NB	NB	NB	S†
	IgG ₁	W	M	M	S†
	IgG _{2a}	S	S	S	S†
	IgG _{2b}	S	S	S	S†
	IgG ₃	S	S	S	S†
Rat	Total IgG	W	M	M	S†
	IgG ₁	W	M	M	S†
	IgG _{2a}	NB	S	S	S†
	IgG _{2b}	NB	W	W	S†
	IgG _{2c}	S	S	S	S†
Cow	Total IgG	W	S	S	NB
	IgG1	W	S	S	NB
	IgG2	S	S	S	NB
Goat	Total IgG	W	S	S	NB
	IgG ₁	W	S	S	NB
	IgG ₂	S	S	S	NB
Sheep	Total IgG	W	S	S	NB
	IgG ₁	W	S	S	NB
	IgG ₂	S	S	S	NB
Horse	Total IgG	W	S	S	?
	IgG(ab)	W	NB	W	?
	IgG(c)	W	NB	W	?
	IgG(T)	NB	S	S	?
Rabbit	Total IgG	S	S	S	W†
Guinea Pig	Total IgG	S	W	S	?
Hamster	Total IgG	M	M	M	S†
Donkey	Total IgG	M	S	S	?
Monkey	Total IgG	S	S	S	?
Pig	Total IgG	S	W	S	S†
Dog	Total IgG	S	W	S	?
Cat	Total IgG	S	W	S	?
Chicken	Total IgY	NB	NB	NB	NB

Binding Strength:

W = weak
 M = medium
 S = strong
 NB = no binding
 ? = unknown

† The stated binding strengths for Protein L refer only to antibody species and subtypes with appropriate kappa light chains. Lambda light chains and some kappa light chains do not bind.

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