

# Affinity Binding Chart

LIGAND	DESCRIPTION	BINDING PARTNER	APPLICATIONS	DOCUMENTS
Streptavidin	MW = 60,000 Da -Ka = 10 <sup>13</sup> /mole -pI = ~5 -4 binding sites -RYD sequence	-biotin -biotinylated molecules	-affinity purification of biotinylated molecules (e.g. post PCR – clean-up of biotinylated amplicons) -coating with biotinylated molecules, e.g. biotinylated antibodies, proteins, peptides, oligonucleotides, etc.	TN 101 TN 302 PDS 621 PDS 714 PDS 530 PDS 721
SuperAvidin™ (deglycosylated avidin)	MW = 60,000 Da -Ka = 10 <sup>15</sup> /mole -pI = 6.3 (~neutral) -4 binding sites	-biotin -biotinylated molecules -less non-specific binding than streptavidin for cell-based applications	-affinity purification of biotinylated molecules (e.g. post PCR – clean-up of biotinylated amplicons) -coating (ie. immobilization of biotinylated molecules, e.g. biotinylated antibodies, peptides, oligonucleotides)	TN 101 TN 302 PDS 621 PDS 714 PDS 530 PDS 721
Biotin	MW = 244.3 Da -Ka = 10 <sup>13</sup> – 10 <sup>15</sup> /mole -binds 1 avidin binding pocket -pI = 3.5	-Streptavidin -SuperAvidin™ (deglycosylated avidin) -avidin -anti-biotin	immobilizing Streptavidin or anti-biotin conjugates	TN 101 PDS 724
Protein G	MW = 21,600 Da -2 binding sites	-polyclonal Fc: human, mouse, cow, goat, sheep, rabbit, horse IgG -monoclonal Fc: Human IgG <sub>1</sub> , IgG <sub>2</sub> , IgG <sub>3</sub> , IgG <sub>4</sub> , Mouse IgG <sub>2a</sub> , IgG <sub>2b</sub> , IgG <sub>3</sub> , Goat IgG <sub>1</sub> , IgG <sub>2</sub> , Sheep IgG <sub>1</sub> , IgG <sub>2</sub>	-purify monoclonal and polyclonal antibodies -coating (immobilization of antibodies) -immunoprecipitation assays	TN 101 PDS 620 PDS 722
Protein A	MW = 42,000 Da -Ka = 10 <sup>8</sup> /mole -4 binding sites (only 2 can be used at one time) pI = 4.85 – 5.10	-polyclonal Fc: human, mouse, rabbit, pig, dog and cat IgG etc. -monoclonal Fc: Human IgG <sub>1</sub> , IgG <sub>2</sub> , IgG <sub>4</sub> ,; Mouse IgG <sub>2a</sub> , IgG <sub>2b</sub> , IgG <sub>3</sub>	-purify monoclonal and polyclonal antibodies -coating (immobilization of antibodies) -immunoprecipitation assays	TN 101 PDS 620 PDS 722
Secondary Antibodies (e.g. Goat anti-Mouse IgG)	MW = ~150,000 Da -2 binding sites -Ka = 10 <sup>7</sup> -10 <sup>11</sup> /mole	Primary antibodies (e.g. Mouse IgG)	-coating (e.g. immobilization of Mouse IgG) -immunoprecipitation	TN 101 PDS 619 PDS 723 PDoc 6/94 PDoc 12/94
Wheat Germ Agglutinin (WGA)	MW= 36,000 Da -2 binding sites Ka = 10 <sup>3</sup> -10 <sup>6</sup> /mole	-N-acetylglucosaminyl sugar residues -sialic acid -chitobiose	-isolating N-acetylglucosamine containing glycoproteins from mammalian serum or cell lysate -structural analysis of complex carbohydrates	PDS 716
Concanavalin A (Con A)	MW = 104,000 Da -4 binding sites Ka = 10 <sup>3</sup> – 10 <sup>6</sup> /mole	glucose & mannose residues -glycopeptides -glycoproteins -saccharides -human IgG	-glycoprotein, glycopeptide, and glycolipid purification	PDS 720