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2 **Fig. S1** Densitometric analysis of dot blots containing immobilized salivary  
3 secretions, naturally occurring glycoproteins and related neoglycoproteins  
4 overlaid with capsule-free *S. pneumoniae* TIGR4 mutant HR1001.1 (grey bars)  
5 and its isogenic PsrP-deficient mutant ( $\Delta psrP$ ) (white bars). The representative  
6 dots shown on the left are identical to the ones shown in Fig. 4 (see tables S1  
7 and S2). Fluorescent signals of bound bacteria were analyzed by densitometry  
8 using the ImageQuant 5.2 software. The bars on the right represent the mean  
9 densitometric volumes obtained from two independent experiments.  
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12 **Table S1.** Naturally occurring glycoproteins used in this study.

Position	Glycoproteins	Origin
B1, B2	Salivary mucin-5B (MUC5B)	Prepared as previously described (Ramasubbu <i>et al.</i> , 1991); Gift from Dr. Molakala S. Reddy
B3, B4	Salivary mucin-7 (MUC7)	Prepared as previously described (Ramasubbu <i>et al.</i> , 1991); Gift from Dr. Molakala S. Reddy
B5	Bovine serum albumin (BSA)	From cow; Pierce, Thermo Scientific
C5	Human serum albumin (HSA)	From human; Fraction V, Sigma-Aldrich
C1, C2	Glycophorin A	From blood type MN; Sigma-Aldrich
C3, C4	Fetuin	From fetal calf serum; Sigma-Aldrich
C5	Human serum albumin (HSA)	From human; Fraction V, Sigma-Aldrich

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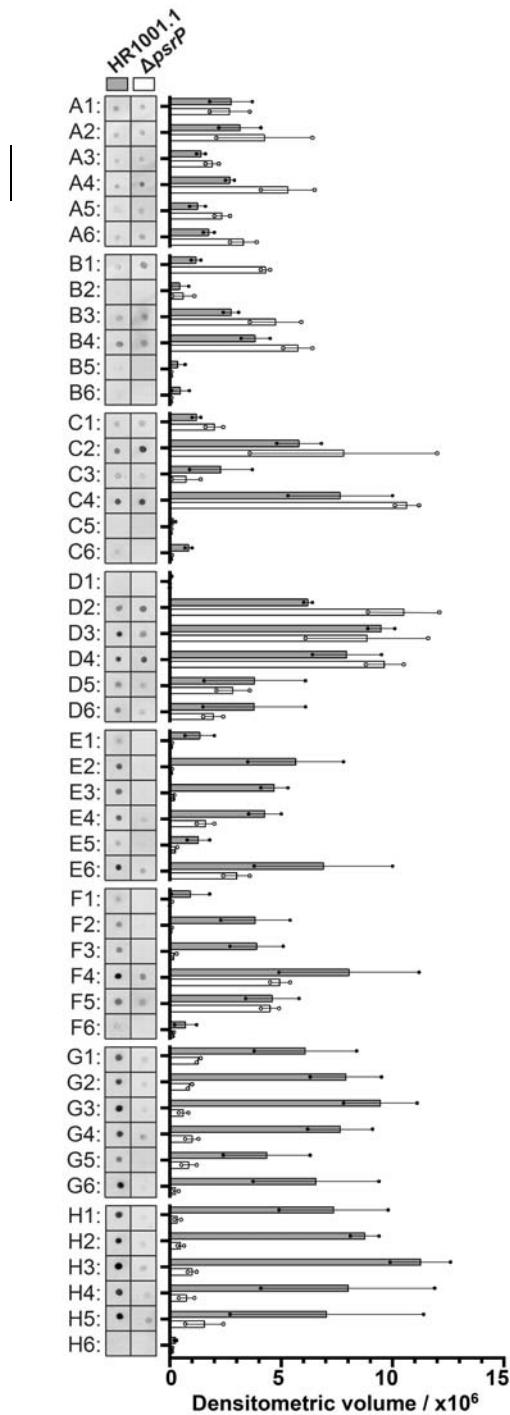
16 **Table S2.** Neoglycoproteins used in this study

Position	BSA/HSA-glycoproteins	Oligosaccharide conjugates
B6	Spacer for PAA conjugates	HOCH <sub>2</sub> (HOCH) <sub>4</sub> CH <sub>2</sub> NH-PAA <sup>a</sup>
C6	Spacer for PAA-Biotin conjugates	HOCH <sub>2</sub> (HOCH) <sub>4</sub> CH <sub>2</sub> NH-PAA-Biotin <sup>a</sup>
D1	Sialyl-T-antigen-PAA	Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-3GalNAc $\alpha$ -PAA <sup>a</sup>
D2	T-antigen-PAA	Gal $\beta$ 1-3GalNAc $\alpha$ -PAA <sup>a</sup>
D3	T-antigen-HSA	Gal $\beta$ 1-3GalNAc $\alpha$ 1-O-APE-HSA <sup>b</sup>
D4	No specified name	(Gal $\alpha$ 1-3GalNAc $\alpha$ -O-spacer) <sub>n</sub> -HSA <sup>c</sup>
D5	No specified name	(GalNAc $\beta$ 1-3Gal $\alpha$ -O-spacer) <sub>n</sub> -BSA <sup>c</sup>
D6	No specified name	(GalNAc $\beta$ 1-4Gal $\beta$ -O-spacer) <sub>n</sub> -BSA <sup>c</sup>
E1	Sialyl-Lewis a-HSA	Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-3[Fuc $\alpha$ 1-4]GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
E2	Lewis a-HSA	Gal $\beta$ 1-3[Fuc $\alpha$ 1-4]GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
E3	H type 1-HSA	Fuc $\alpha$ 1-2Gal $\beta$ 1-3GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
E4	Lacto-N-tetraose-HSA	Gal $\beta$ 1-3GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
E5	3'-sialyl-N-acetylglucosamine-BSA	Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-4GlcNAc-3 atom spacer-BSA <sup>d</sup>
E6	N-acetylglucosamine-BSA	Gal $\beta$ 1-4GlcNAc-3 atom spacer-BSA <sup>d</sup>
F1	Sialyl-Lewis x-HSA	Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-4[Fuc $\alpha$ 1-3]GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
F2	Lewis x-HSA	Gal $\beta$ 1-4[Fuc $\alpha$ 1-3]GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
F3	H type 2-HSA	Fuc $\alpha$ 1-2Gal $\beta$ 1-4GlcNAc $\beta$ 1-O-APE-HSA <sup>b</sup>
F4	Lacto-N-neotetraose-HSA	Gal $\beta$ 1-4GlcNAc $\beta$ 1-3Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
F5	Lactose-BSA	(Gal $\beta$ 1-4Glc $\beta$ -O-spacer) <sub>n</sub> -BSA <sup>c</sup>
F6	No specified name	GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc $\beta$ -PAA-Biotin <sup>a</sup>
G1	Globo-N-tetraose-HSA	GalNAc $\beta$ 1-3Gal $\alpha$ 1-4Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
G2	Gangliotetraose-HSA	Gal $\beta$ 1-3GalNAc $\beta$ 1-4Gal $\beta$ 1-4(Glc)-APD-HSA <sup>b</sup>
G3	$\alpha$ -galactose-HSA	Gal $\alpha$ 1-O-PAP-HSA <sup>b</sup>
G4	$\beta$ -galactose-HSA	Gal $\beta$ 1-O-PAP-HSA <sup>b</sup>
G5	$\alpha$ -N-acetylgalactosamine-HSA	GalNAc $\alpha$ 1-O-PAP-HSA <sup>b</sup>
G6	$\beta$ -N-acetylgalactosamine-HSA	GalNAc $\beta$ 1-O-PAP-HSA <sup>b</sup>
H1	$\alpha$ -glucose-HSA	Gl $\alpha$ 1-O-PAP-HSA <sup>b</sup>
H2	$\alpha$ -N-acetylglucosamine-HSA	GlNAc $\alpha$ 1-O-PAP-HSA <sup>b</sup>
H3	$\beta$ -N-acetylglucosamine-HSA	GlNAc $\beta$ 1-O-PAP-HSA <sup>b</sup>
H4	$\alpha$ -mannose-HSA	Man $\alpha$ 1-O-PAP-HSA <sup>b</sup>
H5	$\beta$ -mannose-HSA	Man $\beta$ 1-O-PAP-HSA <sup>b</sup>

17 <sup>a</sup>GlycoTech, Gaithersburg, MD, United States18 <sup>b</sup>IsoSep AB, Tullinge, Sweden19 <sup>c</sup>Glycorex AB, Lund, Sweden20 <sup>d</sup>Dextra-Laboratories, Reading, United Kingdom

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## FIGURES



## SUPPORTING INFORMATION

### Supplementary Figure 1.

**Fig. S1** Densitometric analysis of dot blots containing immobilized salivary secretions, naturally occurring glycoproteins and related neoglycoproteins overlaid with capsule-free *S. pneumoniae* TIGR4 mutant HR1001.1 (grey bars) and its isogenic PsrP-deficient mutant ( $\Delta psrP$ ) (white bars). The representative dots shown on the left are identical to the ones shown in Fig. 4 (see tables S1 and S2). Fluorescent signals of bound bacteria were analyzed by densitometry using the ImageQuant 5.2 software. The bars on the right represent the mean densitometric volumes obtained from two independent experiments.