

Table 4. Western immunoblot analysis of expressed recombinant proteins

SPy No. ^a	Putative function ^b	Healthy human subject sera ^c							Human sera (invasive episodes) ^d (Convalescent-phase)			
		28	31	51	75	86	89	104	8004	8117	8271	8493
2211	Transmembrane protein Tmp5	-	-	-	-	-	-	-	-	-	-	-
1972	Pullulanase	+	+	+	+	+	+	+	+	+	+	+
1858	XAA-PRO dipeptidyl peptidase	+	+	+	+	+	-	+	+	-	-	-
1857	Catabolite gene activator and regulatory subunit of cAMP-dependent protein kinases	-	-	-	-	-	-	-	-	-	-	-
1361	Internalin homolog	+	+	+	+	+	+	+	-	+	+	+
1239	Aminopeptidase N	-	-	+	-	+	-	-	+	-	-	-
0872	2',3'-cyclic-nucleotide 2'-phosphodiesterase	-	-	+	-	+	-	-	-	+	-	-
0843	Cell surface protein ^e	+	+	+	+	+	+	+	+	+	+	+
0747	Extracellular nuclease	+	-	+	-	+	+	+	-	-	+	+
0277	Amino acid ABC transporter permease component	-	-	+	-	-	-	-	-	-	+	-

^aThe corresponding numerical identifier of each ORF as listed in GenBank.

^bAs determined by WIT2 or BLAST analysis.

^cSera isolated from humans with no known history of invasive GAS infection. Number is arbitrary designation of the human subject.

^dConvalescent sera was obtained greater than 3 weeks after infection onset. Number is arbitrary designation of the patient.

^eBLAST results indicate homology to a cell surface antigen of *Bacteroides forsythus* (GenBank: T31094), a choline-binding protein of *Streptococcus pneumoniae* (GenBank: CAB04758), and internalin B of *Listeria ivanovii* (GenBank: CAC20606).