**SUPPLEMENTARY INFORMATION - Promoting Fc-Fc interactions between anti-capsular antibodies provides strong complement-dependent immune protection against *Streptococcus pneumoniae***

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**Supplementary file 1: Protein sequences used for antibody production.**

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|  | **Sequence** |
| **Variable heavy chain** |
| CPS6-IgG | EVQLVESGGGLVTFGGSLTLSCAASGFTFSRAWLTWVRQAPGGGLEWVGRILRMADGGATDYAATVKGRFTISRDDSKNTVYLHMNNLKTEDTAVYYCANENFWRLDNWGQGTLVTVSS |
| CPS8-IgG(28H11) | EVKLLESGGGLVQPGGSLKLSCAASGFDFSRYWMSWVRQAPGKGLEWIGEINPDSSTINYTPSLKDKFIISRDNAKNTLYLQMSKVRSEDTALYYCARPWFRYFDVWGAGTTVTVSS |
| CPS3-IgG(5F6) | QVQLQQPGAELVRPGASVKLSCKASGYTFTSYWINWMKQRPGQG LEWIGVIDPSDSETHYNQMFKDKATLTVDKSSSTAYMQLSSLTSEDSAVYYCARRGDDGYTPAWFAYWGQGTLVTVSA |
| **Variable light chain** |
| CPS6-IgG | QSALTQPASVSGSPGQSITISCTGTSSDVGTYNHVSWYQQCPGKGPKLLIYDVTNRPSGVSNRFSGSKSDNTASLTISGLQAEDEADYYCYSNTASGAPYVFGSGTKVTVLSQPKANPTVTLFPPSS |
| CPS8-IgG(28H11) | DIVMTQSPSSLAMSVGQKVTMSCKSSQSLLNSSNQKNYLAWYQQKPGQSPKLLVYFASTRESGVPDRFIGSGSGTDFTLTISSVQAEDLADYFCQQHYSTPYTFGGGTKLEIK |
| CPS3-IgG(5F6) | DVVVTQTPLSLPVSLGDQASISCRSSQSLLHSNGNTYLHWYLQK PGQSPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYFCSQSTHVPTF GGGTKLEIK |
| **Constant heavy chain** |
| IgG1 | ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK |
| IgG2 | ASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSNFGTQTYTCNVDHKPSNTKVDKTVERKCCVECPPCPAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTFRVVSVLTVVHQDWLNGKEYKCKVSNKGLPAPIEKTISKTKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPMLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK |
| IgG3 | ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYTCNVNHKPSNTKVDKRVELKTPLGDTTHTCPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVQFKWYVDGVEVHNAKTKPREEQYNSTFRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKTKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESSGQPENNYNTTPPMLDSDGSFFLYSKLTVDKSRWQQGNIFSCSVMHEALHNRFTQKSLSLSPGK |
| **J-chain** |
| IgM | QEDERIVLVDNKCKCARITSRIIRSSEDPNEDIVERNIRIIVPLNNRENISDPTSPLRTRFVYHLSDLCKKCDPTEVELDNQIVTATQSNICDEDSATETCYTYDRNKCYTAVVPLVYGGETKMVETALTPDACYPD |
| **Constant light chain (*kappa* class)** |
| IgG1,2,3, | RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC |
| **Constant light chain (*lambda* class)** |
| IgG1 (CPS6) | EELQANKATLVCLISDFYPGAVTVAWKADGSPVKAGVETTKPSKQSNNKYAASSYLSLTPEQWKSHRSYSCQVTHEGSTVEKTVAPTECS |