

**Table S1. Primers and probes used in this study**

| Species              | Primer and probes | gene        | Sequence                           | Reference  |
|----------------------|-------------------|-------------|------------------------------------|------------|
| <i>S. pneumoniae</i> | F                 | <i>lytA</i> | CCTGTAGCCATTTTCGCCTGA              | (1)        |
|                      | R                 |             | GACCGCTGGAGGAAGCACA                |            |
|                      | P                 |             | 6FAM- AGACGGCAACTGGTACTGGTTCGACAA  |            |
| <i>H. influenzae</i> | F                 | <i>SHD</i>  | GCGGCGAGATATTGACCTGT               | This study |
|                      | R                 |             | GCAGTGGYGGTATGGCAAAA               |            |
|                      | P                 |             | 6FAM-A TGAATTTTTAAAGGCDRCCACAACGGC |            |
| <i>K. pneumoniae</i> | F                 | <i>phoE</i> | CCTGGATCTGACCCTGCAGTA              | (2)        |
|                      | R                 |             | CCGTCGCCGTTCTGTTTC                 |            |
|                      | P                 |             | 6FAM-CAGGGTAAAAACGAAGGC-Mgb        |            |