

**S2 Table. Primers used for RT-qPCR in this study**

| <i>Piscirickettsia salmonis</i>                         |                 |                           |                           |                   |                |                            |
|---------------------------------------------------------|-----------------|---------------------------|---------------------------|-------------------|----------------|----------------------------|
| Gene name                                               | Gene symbol     | Forward sequence<br>5'→3' | Reverse sequence<br>3'→5' | Primer efficiency | Locus tag      | Reference                  |
| <i>outer membrane protein</i>                           | <i>ompA</i>     | CCCCAGCTTTCACCATTAAA      | AATTGGATAGTGCCAGCAG       | 2.035             | PSLF89_RS23070 | Ortiz-Severin et al., 2020 |
| <i>flagellin</i>                                        | <i>fliC</i>     | CACTGATCGCGCAAATCTAA      | ATTGCGCTGCCTGTAATACC      | 1.989             | PSLF89_RS23485 |                            |
| <i>fibronectin-binding protein</i>                      | <i>cadF</i>     | TGCAGTCATTTGTGCTGGAT      | AAACGAAATGGTGCATAGCC      | 1.996             | PSLF89_RS29915 |                            |
| <i>chemotaxis protein</i>                               | <i>cheY</i>     | GTTGGGCTCGCCTTATTAGA      | AGCAGACACCACATCGGTTT      | 1.982             | PSLF89_RS30125 |                            |
| <i>invasion associated protein</i>                      | <i>iap/cwba</i> | GGTATGACGGACGCTTTGAT      | ATAGGCTGCTAAGGCAAGCA      | 2.000             | PSLF89_RS25340 |                            |
| <i>mammalian cell entry</i>                             | <i>mce2B</i>    | CGTCCGTTAGAATTGCTGGT      | TGCTTGCCGAACATCATCA       | 2.014             | PSLF89_RS29945 |                            |
| <i>penicillin-binding protein 1A</i>                    | <i>pbp1A</i>    | CTAAGCGCACCCAAGAACTC      | GACGGTGGTGACAACATCTG      | 1.986             | PSLF89_RS33080 |                            |
| <i>tetraacyldisaccharide 4'-kinase</i>                  | <i>lpxK</i>     | CACGAGGTTATGGCGCTAAT      | GGCACACCCGTTAGTTGTTT      | 2.030             | PSLF89_RS25880 |                            |
| <i>glutamate-1-semialdehyde aminotransferase</i>        | <i>hemL</i>     | TGGTGCACCTCTGATCTTTG      | CAACAGGCATACCTCCACCT      | 2.014             | PSLF89_RS35745 |                            |
| <i>ferric iron reductase</i>                            | <i>fhuF</i>     | TGGCCATCAGGTTCAATCTT      | AACTGGCTTGGGTATTGACG      | 2.029             | PSLF89_RS24790 |                            |
| <i>(p)ppGpp synthase/hydrolase</i>                      | <i>relA</i>     | TGCGTATTATGGTCGGTGAA      | ACCATTTTCTTTTGGCGTTG      | 2.021             | PSLF89_RS22790 |                            |
| <i>stationary phase specific sigma factor</i>           | <i>rpoS</i>     | CGCGAGATTTGTCTCAATCA      | GCCACAGGATCTGCCATATT      | 2.016             | PSLF89_RS25070 |                            |
| <i>two component response transcriptional regulator</i> | <i>mprA</i>     | GAGAGCGAGCCTGTCAATCT      | CAACCGTAGAGGGATTGCAT      | 2.008             | PSLF89_RS27550 |                            |
| <i>bifunctional (p)ppGpp synthase/hydrolase</i>         | <i>spoT</i>     | ATGCTGGACGCGGTATTATC      | GACATTTCCACACGAACACG      | 1.984             | PSLF89_RS28815 |                            |
| <i>stringent starvation protein A</i>                   | <i>sspA</i>     | TTTACGCTGGTTGATTGCAG      | TGCATCACGAGAAAACAAGC      | 1.999             | PSLF89_RS19855 |                            |
| <i>type IV secretion system protein</i>                 | <i>icmE</i>     | CGCTTAAGTGCACAGGATCA      | TATCCCAATCACCCACCATT      | 2.031             | PSLF89_RS30855 |                            |
| <i>type IV secretion system protein</i>                 | <i>icmG</i>     | CCAGGTTAAATTGTTGGTTGC     | CAAACCCAGAGCTCGTGATA      | 1.988             | PSLF89_RS30850 |                            |
| <i>type IV secretion system protein</i>                 | <i>icmJ</i>     | TGATGATCGCAATGGCTAAA      | ACCAGAAACCCGACTCAATG      | 2.023             | PSLF89_RS30800 |                            |
| <i>type IV secretion system protein</i>                 | <i>icmB</i>     | TGCCGATATTGGCTGATACA      | GGGCTCGTTAGTGTTGAAAA      | 2.012             | PSLF89_RS30790 |                            |
| <i>type IV secretion system protein</i>                 | <i>icmG</i>     | AAGGCCGATGTTGCATTATT      | GCCTTTCGCTGACTTACTGC      | 2.007             | PSLF89_RS24230 |                            |

|                                                  |                    |                                   |                                   |                          |                         |                          |
|--------------------------------------------------|--------------------|-----------------------------------|-----------------------------------|--------------------------|-------------------------|--------------------------|
| <i>type IV secretion system protein</i>          | <i>icmP</i>        | TCGACGACCCATGATATGAA              | TTTCTTCACCAACCCAAACC              | 1.990                    | PSLF89_RS24275          |                          |
| <i>type IV secretion system protein</i>          | <i>icmB</i>        | GATATTGGGCCTTCAAGCAA              | GCCCCTAACTGCGTATCAAA              | 1.988                    | PSLF89_RS24290          |                          |
| <i>type IV secretion system protein</i>          | <i>icmV</i>        | CATTGATGACGGCAATTATAGG            | CAAGCTGGCCGACTTTAATC              | 2.003                    | PSLF89_RS24320          |                          |
| <i>murine toxin</i>                              | <i>ymt</i>         | ATGTGCAATGGCTATGCTGA              | ATCAGGCCAACTTTCCAATG              | 2.023                    | PSLF89_RS34605          |                          |
| <i>cell filamentation protein</i>                | <i>fic</i>         | CAGCCTCGTATGATTGACCA              | GGCCATTACCATCAGCAAAT              | 2.008                    | PSLF89_RS34625          |                          |
| <i>secreted effector protein</i>                 | <i>pipB2</i>       | GCGATGCCACACCTAAATCT              | TTCTTGTGGCAAATGAGCAG              | 1.983                    | PSLF89_RS34855          |                          |
| <i>secreted effector protein</i>                 | <i>pipB2</i>       | TGGGTGGAATCTTGAAGGAG              | TTTTTCGCAACAGTGCCTAA              | 1.998                    | PSLF89_RS34870          |                          |
| <i>secreted effector protein</i>                 | <i>pipB2</i>       | GCGATGCCACACCTAAATCT              | TTCTTGTGGCAAATGAGCAG              | 2.000                    | PSLF89_RS35360          |                          |
| <i>endopeptidase</i>                             | <i>pepO</i>        | TGAAGACCGTGGATACACACA             | GGGAAGAGGTTGAAGAGTCG              | 2.020                    | PSLF89_RS34880          |                          |
| <i>enterotoxin</i>                               | <i>ospD3</i>       | AGCGGCTTATATCCATGGTG              | AATAGGTTTCTGCCGCTTGA              | 1.987                    | PSLF89_RS27860          |                          |
| <i>serine/threonine protein kinase</i>           | <i>pkn5</i>        | TTTTGGCTGGAAGAAGGCTA              | TGCTGCGATATCTTCGTTTG              | 1.979                    | PSLF89_RS28440          |                          |
| <i>DNA replication and repair family protein</i> | <i>recF</i>        | CGCCTTCAAGCCAATTGTGG              | GCAAGCTTTTCACCTTGCCA              | 2.003                    | PSLF89_RS33770          |                          |
| <i>Transcription termination factor</i>          | <i>rho</i>         | GCCAAGCGTTTGGTTGAACA              | CTGAAGATGGTGCGACCGTA              | 2.098                    | PSLF89_RS32915          |                          |
| <i>Salmo salar</i>                               |                    |                                   |                                   |                          |                         |                          |
| <b>Gene name</b>                                 | <b>Gene symbol</b> | <b>Forward sequence<br/>5'→3'</b> | <b>Reverse sequence<br/>3'→5'</b> | <b>Primer efficiency</b> | <b>Accession number</b> | <b>Reference</b>         |
| <i>interleukin 1, beta</i>                       | <i>il1b</i>        | GGAGAGGTTAAAGGGTGGCG              | TCCTTGAAC TCGTTCCCAT              | 2.058                    | AY617117                | Schiøtz et al., 2009     |
| <i>interleukin 6</i>                             | <i>il6</i>         | CAGCTTCTTCTTCAGCACGTTAA           | CGTAGACACCTCACCCAGAAC             | 2.008                    | HF913655                | Zante et al 2015         |
| <i>interleukin 8</i>                             | <i>il8</i>         | AGCGGCAGATTCAAAC TCAC             | GTTGTTGGCCAGCATCTTCT              | 1.984                    | BT046706                | Reyes-Cerpa et al., 2012 |
| <i>interleukin 10</i>                            | <i>il10</i>        | GAACTCCGCACATCCTTCTC              | CGTTGATGTCAAACGGTTTCT             | 1.993                    | EF165029                | Reyes-Cerpa et al., 2012 |
| <i>interleukin 12</i>                            | <i>il12</i>        | CTGAATGAGGTGGACTGGTATG            | ATCGTCCTGTTCTCCG                  | 2.001                    | BT049114                | Hynes et al., 2011       |
| <i>interferon alpha</i>                          | <i>ifnα</i>        | CCTGCCATGAAACCTGAGAAGA            | TTTCCTGATGAGCTCCCATGC             | 2.022                    | XM_014192435.1          | Jørgensen et al., 2007   |

|                                                        |              |                          |                          |       |            |                        |
|--------------------------------------------------------|--------------|--------------------------|--------------------------|-------|------------|------------------------|
| <i>interferon gamma</i>                                | <i>ifnγ</i>  | TTCAGGAGACCCAGAAACACTAC  | TAATGAACTCGGACAGAGCCTTC  | 2.016 | AY795563   | Jørgensen et al., 2007 |
| <i>tumor necrosis factor alpha</i>                     | <i>tnfa</i>  | CCAAACATTGGCTTGCACGA     | AGCAGCAGGTCCTGAGAGTA     | 1.990 |            | Pulgar et al., 2015    |
| <i>selenoprotein Pa</i>                                | <i>selPa</i> | TGGCTGGAAAGAAGGATGAC     | TGCTCTCATACGTGCAGTCC     | 2.003 |            | Pulgar et al., 2015    |
| <i>interferon-induced guanylate binding protein 1,</i> | <i>gbp1</i>  | CGTCAATCAGCTGTCAGAGAACCA | TCGGAGGCATCCTTGTCTGTTTG  | 2.005 |            | Alvares et al., 20176  |
| <i>cathepsin D</i>                                     | <i>cstD</i>  | GCCTGTCATCACATTCAACCT    | CCACTCAGGCAGATGGTCTTA    | 1.993 | U90321     | Alvares et al., 20176  |
| <i>hepcidin</i>                                        | <i>hamp</i>  | CATTGAAAATCGTGCATTGG     | AAGGCCTTCATTCTCGGTTT     | 1.998 |            | Pulgar et al., 2015    |
| <i>transferrin receptor</i>                            | <i>trfr</i>  | TTGTCGCAACCCCTATAACC     | AAGACAGCCCACATCAGGTC     | 2.001 |            | Pulgar et al., 2015    |
| <i>ferritin, lower subunit</i>                         | <i>ferl</i>  | TGTGCATGCATTTCCGTTAT     | TTCAGTGCGAACCCATTACA     | 2.004 |            | Pulgar et al., 2015    |
| 18S RNA                                                | <i>18S</i>   | TGTGCCGCTAGAGGTGAAATT    | GCAAATGCTTTCGCTTTCG      | 1.985 | AJ427629.1 | Jørgensen et al., 2007 |
| <i>elongation factor 1 alpha</i>                       | <i>eef1a</i> | CACCACCGGCCATCTGATCTACAA | TCAGCAGCCTCCTTCTCGAACTTC | 2.000 | AF321836   | Jørgensen et al., 2007 |

***Danio rerio***

| Gene name                  | Gene symbol  | Forward sequence<br>5'→3'             | Reverse sequence<br>3'→5' | Primer efficiency | Accession number | Reference             |
|----------------------------|--------------|---------------------------------------|---------------------------|-------------------|------------------|-----------------------|
| <i>interleukin 1, beta</i> | <i>il1b</i>  | QuantiTect Primer Assay Dr_il1b_1_SG  |                           | 2.027             | NM_212844,       | Tandberg et al., 2016 |
| <i>interleukin 8</i>       | <i>il8</i>   | QuantiTect Primer Assay Dr_il8_1_SG   |                           | 2.004             | XM_001342570,    | Tandberg et al., 2016 |
| <i>interleukin 10</i>      | <i>il10</i>  | QuantiTect Primer Assay Dr_il10_1_SG  |                           | 1.999             | NM_001020785     | Tandberg et al., 2016 |
| <i>interleukin 12a</i>     | <i>il12</i>  | QuantiTect Primer Assay Dr_il12a_1_SG |                           | 1.998             | NM_00100710      | Tandberg et al., 2016 |
| <i>interferon phi 1</i>    | <i>ifnΦ1</i> | QuantiTect Primer Assay Dr_ifnphi1_SG |                           | 1.981             | NM_207640,       | This study            |
| <i>interferon phi 2</i>    | <i>ifnΦ2</i> | QuantiTect Primer Assay Dr_ifnphi2_SG |                           | 2.026             | NM_00111108      | This study            |

|                                                             |                   |                                         |                         |       |                                               |                       |
|-------------------------------------------------------------|-------------------|-----------------------------------------|-------------------------|-------|-----------------------------------------------|-----------------------|
| <i>interferon phi 3</i>                                     | <i>ifnΦ3(1)</i>   | QuantiTect Primer Assay Dr_ifnphi3_1_SG |                         | 2.024 | NM_001111083                                  | This study            |
| <i>interferon phi 3</i>                                     | <i>ifnΦ3(2)</i>   | QuantiTect Primer Assay Dr_ifnphi3_2_SG |                         | 2.032 | NM_00111108                                   | This study            |
| <i>interferon gamma</i>                                     | <i>ifnγ1-1</i>    | QuantiTect Primer Assay Dr_ifng1-1_1_SG |                         | 1.992 | NM_001020793                                  | This study            |
| <i>interferon gamma</i>                                     | <i>ifnγ1-2</i>    | QuantiTect Primer Assay Dr_ifng1-2_1_SG |                         | 2.040 | NM_212864                                     | Tandberg et al., 2016 |
| <i>tumor necrosis factor alpha</i>                          | <i>tnfα</i>       | QuantiTect Primer Assay Dr_tnfa_1_SG    |                         | 1.997 | NM_212859                                     | Tandberg et al., 2017 |
| <i>iNOS (inducible nitric oxide synthetase)</i>             | <i>nos2a</i>      | QuantiTect Primer Assay Dr_nos2a_1_SG   |                         | 2.024 | NM_001104937                                  | This study            |
| <i>selenoprotein Pa</i>                                     | <i>sepp1a</i>     | QuantiTect Primer Assay Dr_sepp1a_1_SG  |                         | 1.951 | NM_178297                                     | This study            |
| <i>interferon-induced guanylate-binding protein 1, GBP1</i> | <i>gbp1</i>       | QuantiTect Primer Assay Dr_gbp1_1_SG    |                         | 1.976 | NM_001002343<br>XM_005171375,<br>XM_005171376 | This study            |
| <i>cathepsin D</i>                                          | <i>ctsd</i>       | Dr_ctsd_1_SG QuantiTect Primer Assay    |                         | 2.046 | NM_131710,<br>XM_005159140                    | Sieger et al., 2009   |
| <i>hepcidin</i>                                             | <i>hamp1</i>      | QuantiTect Primer Assay Dr_hamp1_1_SG   |                         | 1.993 | NM_205583,<br>XM_005170766<br>XM_005170767    | This study            |
| <i>transferrin receptor</i>                                 | <i>tfr2</i>       | QuantiTect Primer Assay Dr_tf2_1_SG     |                         | 1.992 | NM_001009916                                  | This study            |
| <i>transferrin</i>                                          | <i>tfa1</i>       | QuantiTect Primer Assay Dr_tfa1_1_SG    |                         | 2.023 | NM_001015057<br>XM_005168411<br>XM_005168412  | This study            |
| <i>ferritin</i>                                             | <i>fth1a</i>      | QuantiTect Primer Assay Dr_fth1a_1_SG   |                         | 1.975 | NM_131585,<br>XM_005166370,<br>XM_005166371   | This study            |
| <i>interleukin 6</i>                                        | <i>il6</i>        | TCAACTTCTCCAGCGTGATG                    | TCTTTCCCTCTTTTCCTCCTG   | 2.033 | NM_001114318                                  | Tandberg et al., 2016 |
| <i>myeloperoxidase</i>                                      | <i>mpx</i>        | TGATGTTTGTTAGGAGGTG                     | GAGCTGTTTCTGTTTGGTG     | 2.010 | NM_212779                                     | Tandberg et al., 2016 |
| <i>macrophage expressed gene 1</i>                          | <i>mpeg-1</i>     | TACAGCACGGGTCAAGTCCGT                   | ACTTGTGATGACATGGGTGCC G | 1.990 | NM_212737                                     | Tandberg et al., 2016 |
| <i>18S rRNA</i>                                             | <i>zgc:158463</i> | GCCTGCGGCTTAATTTGACT                    | ACCACCCACAGAATCGAGAAA   | 1.948 | NM_001098396                                  | Tandberg et al., 2016 |

|                                                           |          |                           |                         |       |             |                       |
|-----------------------------------------------------------|----------|---------------------------|-------------------------|-------|-------------|-----------------------|
| Eukaryotic translation elongation factor 1 alpha 1, like1 | eef1a111 | CTT CTC AGG CTG ACT GTG C | CCG CTA GCA TTA CCC TCC | 2.035 | NM_131263.1 | Tandberg et al., 2016 |
|-----------------------------------------------------------|----------|---------------------------|-------------------------|-------|-------------|-----------------------|

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