

S3 Table. *S. wadsworthensis* 3_1_45B aryl-sulfate sulfotransferase information.

| Annotated Gene | Gene ID | Locus Tag | %GC | Predicted Protein | Length (AA) | Signal Peptide Length (AA) | Signal Peptide Type | Trans-membrane Region |
|----------------|-----------|------------------|-----|-------------------|-------------|----------------------------|---------------------|-----------------------|
| <i>asst1</i> | 650086806 | HMPREF9464_00020 | 59 | SwASST1 | 608 | 26 | TAT | Yes |
| <i>asst2</i> | 650089201 | HMPREF9464_02348 | 61 | SwASST2 | 609 | 22 | Sec | No |
| <i>asst3</i> | 650088873 | HMPREF9464_02031 | 55 | SwASST3 | 606 | 33 | TAT | No |
| <i>asst4</i> | 650088620 | HMPREF9464_01783 | 55 | SwASST4 | 615 | 32 | Sec | Yes |
| <i>asst5</i> | 650088457 | HMPREF9464_01628 | 55 | SwASST5 | 614 | 31 | TAT | No |
| <i>asst6</i> | 650088274 | HMPREF9464_01448 | 49 | SwASST6 | 612 | 25 | TAT | No |
| <i>asst7</i> | 650088224 | HMPREF9464_01399 | 55 | SwASST7 | 610 | 27 | Sec | Yes |
| <i>asst8</i> | 650087927 | HMPREF9464_01116 | 54 | SwASST8 | 605 | 20 | Sec | Yes |
| <i>asst9</i> | 650087562 | HMPREF9464_00769 | 54 | SwASST9 | 613 | 29 | Sec | Yes |
| <i>asst10</i> | 650087393 | HMPREF9464_00601 | 50 | SwASST10 | 607 | 24 | Sec | No |
| <i>asst11</i> | 650087285 | HMPREF9464_00493 | 49 | SwASST11 | 449 | - | - | No |
| <i>asst12</i> | 650086997 | HMPREF9464_00211 | 57 | SwASST12 | 608 | 28 | Sec | Yes |
| <i>asst13</i> | 650086849 | HMPREF9464_00063 | 56 | SwASST13 | 608 | 23 | Sec | No |
| <i>asst14</i> | 650087646 | HMPREF9464_00851 | 58 | SwASST14 | 608 | 25 | TAT | Yes |
| <i>asst15</i> | 650088356 | HMPREF9464_01527 | 56 | SwASST15 | 608 | 26 | Sec | Yes |
| <i>asst16</i> | 650086913 | HMPREF9464_00127 | 60 | SwASST16 | 607 | 23 | TAT | No |
| <i>asst17</i> | 650086936 | HMPREF9464_00150 | 57 | SwASST17 | 606 | 25 | Sec | Yes |

For each annotated gene, there is a gene ID, locus tag, and information that is presented visually earlier.