**Supplementary file 1. Sequence information for gustatory receptors of *Plutella xylostella***

|  |  |  |  |
| --- | --- | --- | --- |
| Reported PxylGrs | PxylGrs in this study | GenBank number | Notes |
| PxylGr1\* | PxylGr1 | XP\_011560061.1 |  |
| PxylGr2\* | PxylGr2 | XP\_011560059.1 |  |
| PxylGr3\* | PxylGr3 | XP\_011560063.1 |  |
| PxylGr4\* | PxylGr4 | XP\_011560065.1 |  |
| PxylGr5\* | PxylGr5 | XP\_011568607.1 |  |
| PxylGr6\* | (delete) |  | Partial sequence of PxylGr5 |
| PxylGr7\* | PxylGr7 | XP\_011557481.1 |  |
| PxylGr8\* | PxylGr8 | XP\_011558222.1 |  |
| PxylGr9\* | (delete) |  | Partial sequence of PxylGr8 |
| PxylGr10\* | PxylGr10 |  |  |
| PxylGr11\* | PxylGr11 |  |  |
| PxylGr12\* | PxylGr12 |  |  |
| PxylGr13\* | PxylGr13 |  |  |
| PxylGr14\* | PxylGr14 |  |  |
| PxylGr15\* | PxylGr15 |  |  |
| PxylGr16\* | PxylGr16 |  |  |
| PxylGr17\* | PxylGr17 |  |  |
| PxylGr18\* | PxylGr18 |  |  |
| PxylGr19\* | PxylGr19 |  |  |
| PxylGr20\* | PxylGr20 |  |  |
| PxylGr21\* | PxylGr21 |  |  |
| PxylGr22\* | PxylGr22 |  |  |
| PxylGr23\* | PxylGr23 |  |  |
| PxylGr24\* | (delete) |  | Partial sequence of PxylGr19 |
| PxylGr25\* | (delete) |  | Repetitive sequence with PxylGr20 |
| PxylGr26\* | (delete) |  | Partial sequence of PxylGr21 |
| PxylGr27\* | (delete) |  | Repetitive sequence with PxylGr22 |
| PxylGr28\* | (delete) |  | Repetitive sequence with PxylGr23 |
| PxylGr29\* | PxylGr29 |  |  |
| PxylGr30\* | PxylGr30 | XP\_011561237.1 |  |
| PxylGr31\* | PxylGr31 | XP\_011561224.1 |  |
| PxylGr32\* | PxylGr32 |  |  |
| PxylGr33\* | PxylGr33 |  |  |
| PxylGr34\* | PxylGr34 |  |  |
| PxylGr35\* | PxylGr35 | XP\_011565113.1 |  |
| PxylGr36\* | PxylGr36 |  |  |
| PxylGr37\* | PxylGr37 | XP\_011548483.1 |  |
| PxylGr38\* | PxylGr38 | XP\_011552106.1 |  |
| PxylGr39\* | PxylGr39 |  |  |
| PxylGr40\* | PxylGr40 |  |  |
| PxylGr41\* | PxylGr41 |  |  |
| PxylGr42\* | PxylGr42 |  |  |
| PxylGr43\* | PxylGr43 |  |  |
| PxylGr44\* | PxylGr44 |  |  |
| PxylGr45\* | PxylGr45 |  |  |
| PxylGr46\* | PxylGr46 |  |  |
| PxylGr47\* | PxylGr47 |  |  |
| PxylGr48\* | PxylGr48 |  |  |
| PxylGr49\* | PxylGr49 |  |  |
| PxylGr50\* | PxylGr50 |  |  |
| PxylGr51\* | PxylGr51 |  |  |
| PxylGr52\* | PxylGr52 |  |  |
| PxylGr53\* | PxylGr53 |  |  |
| PxylGr54\* | PxylGr54 |  |  |
| PxylGr55\* | PxylGr55 |  |  |
| PxylGr56\* | PxylGr56 |  |  |
| PxylGr57\* | PxylGr57 |  |  |
| PxylGr58\* | PxylGr58 |  |  |
| PxylGr59\* | PxylGr59 |  |  |
| PxylGr60\* | PxylGr60 |  |  |
| PxylGr61\* | PxylGr61 |  |  |
| PxylGr62\* | PxylGr62 |  |  |
| PxylGr63\* | PxylGr63 |  |  |
| PxylGr64\* | PxylGr64 |  |  |
| PxylGr65\* | PxylGr65 |  |  |
| PxylGr66\* | PxylGr66 |  |  |
| PxylGr67\* | PxylGr67 |  |  |
| PxylGr68\* | PxylGr68 |  |  |
| PxylGr69\* | PxylGr69 |  |  |
| PxylGR1# | (delete) |  | Partial sequence of PxylGr75 |
| PxylGR2# | (delete) |  | Partial sequence of PxylGr34 |
| PxylGR3# | PxylGr72 |  |  |
| PxylGR4# | PxylGr73 |  |  |
| PxylGR5# | (delete) |  | Partial sequence of Gr77 |
| PxylGR6# | (delete) |  | Longer than PxylGr5 |
| PxylGR7# | (delete) |  | Partial sequence of Gr77 |
| PxylGr64f-like※ | PxylGr77 | XP\_011560052.1 |  |
| PxylGr64f-like※ | PxylGr78 | XP\_011560051.1 |  |
| PxylGr28b※ | PxylGr79 | XP\_011565110.1 |  |

\*: Named by Engsontia et al., 2014; #: Named by Yang et al., 2017; ※: Acquired from the GenBank