**The whole body transcriptome of *Coleophora obducta* reveals important olfactory proteins**

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**Supplementary file 2**

**The protein names and gene accession number were used in phylogenetic trees**

|  |  |
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| **CSP** | **CSP** |
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| FJ652462 | SlittCXE19 | KX015870 | EoblCXE28 | MK864066 | PintCXE6 |
| FJ652461 | SlittCXE18 | KX015871 | EoblCXE29 | MK864065 | PintCXE5 |
|  FJ652460 | SlittCXE17 | KX015872 | EoblCXE30 | MK864064 | PintCXE4 |
| FJ652459 | SlittCXE16 | KX015873 | EoblCXE31 | MK864063 | PintCXE3 |
| FJ652458 | SlittCXE15 | KX015874 | EoblCXE32 | MK864062 | PintCXE2 |
|  FJ652457 | SlittCXE14 | KX015875 | EoblCXE33 | MK864061 | PintCXE1 |
|  FJ652456 | SlittCXE13 | KX015876 | EoblCXE34 | KX015866 | EoblCXE24 |
| FJ652455 | SlittCXE12 | KX015877 | EoblCXE35 | KX015867 | EoblCXE25 |
| FJ652454 | SlittCXE11 | NM\_079544 | CG2505aE2 | MK864070 | PintCXE10 |
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| FJ652452 | SlittCXE9 | NM\_137834 | CG6018aE1-0 | KX015862 | EoblCXE20 |
|  FJ652451 | SlittCXE8 | NM\_001260036 | CG1089aE5 | KX015863 | EoblCXE21 |
|  FJ652450 | SlittCXE7 | NM\_079537 | CG1112aE7 | KX015864 | EoblCXE22 |
| FJ652449 | SlittCXE6 |  NM\_079535 | CG1121aE8 | KX015865 | EoblCXE23 |
| FJ652448 | SlittCXE5 | NM\_169187 | CG1128aE9 | MK864073 | PintCXE13 |
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| FJ652445 | SlittCXE2 | NM\_079542 | CG1082aE4 | MK864078 | PintCXE18 |
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| AF327882 | MsexJHE | NM\_001126244 | GB10820 | KX015858 | EoblCXE16 |
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| EF558769 | GassJHE | NM\_001145739 | GB13939  | KX015860 | EoblCXE18 |
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| KX015844 | EoblCXE2 | XM\_396706 | GB12309 | MK864071 | PintCXE11 |
| KX015845 | EoblCXE3 | AY866480 | ApolPDE | 　 | 　 |
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| KX015847 | EoblCXE5 | AY091504 | AploIE | 　 | 　 |
| KX015848 | EoblCXE6 | MK864088 | PintCXE28 | 　 | 　 |
| KX015849 | EoblCXE7 | MK864087 | PintCXE27 | 　 | 　 |
| KX015850 | EoblCXE8 | MK864086 | PintCXE26 | 　 | 　 |
| KX015851 | EoblCXE9 | MK864085 | PintCXE25 | 　 | 　 |
| KX015852 | EoblCXE10 | MK864084 | PintCXE24 | 　 | 　 |
| KX015853 | EoblCXE11 | MK864083 | PintCXE23 | 　 | 　 |
| KX015854 | EoblCXE12 | MK864082 | PintCXE22 | 　 | 　 |
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| AII01108.1  | DkikOR3 | AJO62231.1  | TmolOR12 | CUQ99403.1 | MsexOR21 | AUW64514.1  | AfasOrco |
| AII01107.1  | DkikOR4 | AJO62230.1  | TmolOR11 | CUQ99402.1 | MsexOR20 | AKO69815.1  | CchlOrco |
| AII01106.1  | DkikOR5 | AJO62229.1  | TmolOR10 | CUQ99401.1 | MsexOR18 | AKC58535.1  | AcorOrco |
| AII01105.1  | DkikOR6 | AJO62228.1  | TmolOR9 | CUQ99400.1 | MsexOR17 | AHL20247.1  | AalbOrco |
| AII01104.1  | DkikOR7 | AJO62227.1  | TmolOR8 | CUQ99399.1 | MsexOR16 | AGF29886.1  | CpunOrco |
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| AII01102.1  | DkikOR9 | AJO62225.1  | TmolOR6 | CUQ99397.1 | MsexOR13 | AEX28370.1  | LmigOrco |
| AII01101.1  | DkikOR10 | AJO62224.1  | TmolOR5 | CUQ99396.1 | MsexOR12 | AFX73448.1  | LlinOrco |
| AII01100.1  | DkikOR11 | AJO62223.1  | TmolOR4 | CUQ99395.1 | MsexOR11 | AFX73447.1  | LhesOrco |
| AII01099.1  | DkikOR12 | AJO62222.1 | TmolOR3 | CUQ99394.1 | MsexOR10 | AWO14314.1  | LstrOrco |
| AII01098.1  | DkikOR13 | AJO62221.1  | TmolOR2 | CUQ99393.1 | MsexOR9 | AVO63533.1  | YsigOrco |
| AII01097.1  | DkikOR14 | AJO62220.1  | TmolOR1 | CUQ99392.1  | MsexOR8 | APZ81509.1 | AlinOrco |
| AII01096.1  | DkikOR15 | ABY55454.1  | DmauOR33b | CUQ99391.1  | MsexOR7 | AHC72290.1 | AlucOrco |
| AII01095.1  | DkikOR16 | ADD14628.1  | DmauOR85a  | CUQ99390.1  | MsexOR6 | AJO62219.1  | TmolOrco |
| AII01094.1  | DkikOR17 | ADD14627.1  | DmauOR59c  | CUQ99389.1  | MsexOR5 | AVN97813.1 | AchiOrco |
| AII01093.1  | DkikOR18 | ADD14626.1  | DmauOR59b  | CUQ99388.1  | MsexOR4 |  |  |
| AII01092.1  | DkikOR19 | ADD14625.1  | DmauOR43b  | CUQ99387.1  | MsexOR1 |  |  |
| AII01091.1  | DkikOR20 | ADD14624.1  | DmauOR42b  | ACM18059.1 | MsexPR |  |  |
| AII01090.1  | DkikOR21 | ADD14623.1  | DmauOR7a  | NP\_001097687.1 | DmelOrco B |  |  |
| AII01089.1  | DkikOR22 | ACM18060.1  | MsexOR2 | NP\_524235.2  | DmelOrco A |  |  |
| AII01088.1  | DkikOR23 | AFL70825.1  | MsexOR62 | AII15784.1  | ScerOrco |  |  |
| AII01087.1  | DkikOR24 | ADM32898.1  | MsexOR5 | XP\_001359364.3  | DpseOrco |  |  |
| AII01086.1  | DkikOR25 | ADM32897.1  | MsexOR4 | AWV67916.1  | LcapOrco |  |  |
| AII01085.1  | DkikOR26 | ACM18061.1  | MsexOR3 | AGS41440.1 | AsegOrco |  |  |
| AII01084.1  | DkikOR27 | CUQ99422.1  | MsexOrco | AEA30004.2 | CmegOrco |  |  |
| AII01083.1  | DkikOR28 | CUQ99421.1 | MsexOR80 | AFH96944.1  | MdomOrco |  |  |
| AII01082.1  | DkikOR29 | CUQ99419.1  | MsexOR65 | AFH96943.1  | CrufOrco |  |  |
| AII01081.1  | DkikOR30 | CUQ99418.1  | MsexOR42 | ATV96621.1  | EsemOrco |  |  |
| AII01080.1  | DkikOR31 | CUQ99417.1 | MsexOR40 | RLZ02183.1  | CcinOrco |  |  |
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| AII01078.1  | DkikOR33 | CUQ99415.1 | MsexOR35 | BAO48211.1 | CjapOrco |  |  |
| AJF20961.1  | ObruPR | CUQ99414.1 | MsexOR34 | AQY16483.1 | PsauOrco |  |  |
| ALT31682.1  | CmedPR1 | CUQ99413.1 | MsexOR33 | ALT31679.1  | CmedOrco |  |  |
| ALT31681.1  | CmedPR2 | CUQ99412.1  | MsexOR31 | AJF94638.2 | AquaOrco |  |  |
| AJG42377.1  | HarmPR | CUQ99411.1  | MsexOR30 | AIO10777.1  | AfunOrco |  |  |
| AIZ94619.1  | OnubPR | CUQ99410.1 | MsexOR29 | AFC91712.1 | CpomOrco |  |  |
| JAG00306.1  | LhesPR | CUQ99409.1 | MsexOR27 | AOT85634.1 | MdesOrco |  |  |
| AJO62238.1  | TmolOR19 | CUQ99408.1 | MsexOR26 | BAU20240.1 | RspeOrco |  |  |
| AJO62237.1  | TmolOR18 | CUQ99407.1 | MsexOR25 | NP\_001303637.1 | ClecOrco1 |  |  |
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| DmelIR75d  | 386771401 |
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| XP\_026298378.1 | AmelOBP 6 X1 | AFD34176.1 |  AconPBP1 | EFA05695.1 | TcasOBP11 | ACX53696.1  | HvirOBP9 |
| XP\_016770832.2 | AmelOBP 12 X1 | AAP57469.1  | AsegPBP | EFA05678.1 | TcasOBP1 | CAA65606.1  | HvirGOBP2 |
| XP\_016772293.1 | AmelOBP 19 X1  | AAP57468.1 |  AipsPBP1 | EFA05677.1  | TcasOBP5 | CAA65605.1  | HvirGOBP1 |
| XP\_016771954.1 | AmelOBP 9 X1 | AAP57467.1 |  AipsPBP2 | EFA05675.1  | TcasOBP3 | AGM38613.1 | CsupOBP5 |
| XP\_006566010.1 | AmelOBP 10 X1 | BAH36763.1 | BmorOBP7 | EFA04594.1  | TcasOBP6 | AGM38612.1 | CsupOBP6 |
| XP\_006567396.1 | AmelOBP 3 X1 | BAH36762.1  | BmorOBP8 | EFA04593.1  | TcasOBP7 | AGM38611.1 | CsupOBP7 |
| NP\_001164515.1 | AmelOBP 8 | BAH36761.1 | BmorOBP9 | EFA04576.1  | TcasOBP24 | AGM38610.1 | CsupOBP8 |
| AAL60422.1 | AmelOBP 5 | BAH36761.1 | BmorOBP10 | EFA02960.1  | TcasOBP19 | AGM38609.1 | CsupOBP9 |
| AAL60421.1 | AmelOBP 6 | BAH36760.1 | BmorOBP11 | EFA02914.1  | TcasOBP14 | AGM38608.1 | CsupOBP10 |
| AAL60420.1 | AmelOBP 4 | BAH36759.1 | BmorOBP12 | EFA02861.1  | TcasOBP17 | AGM38607.1 | CsupOBP11 |
| AAL60419.1 | AmelOBP 1 | BAI44701.1 | BmorOBP13 | EFA02860.1  | TcasOBP18 | AGM38606.1 | CsupOBP12 |
| AAL60418.1 | AmelOBP 2 | BAI44700.1 | BmorOBP14 | EFA02858.1  | TcasOBP13 | AGM38605.1 | CsupOBP13 |
| AAL60417.1 | AmelOBP 4 | BAI22690.1 | BmorOBP15 | EFA02857.1 | TcasOBP12 | ADD71058.1 | CsupOBP14 |
| AAF06123.1 | SexiPBP | BAI22689.1 | BmorOBP16 | AII01010.1  | DkikOBP1 | ACJ07120.1 | CsupGOBP2 |
| AAF06144.1  | CmurPBP4 | BAH79159.1 | BmorOBP17 | AII01009.1  | DkikOBP2 | ACJ07127.1 | CsupGOBP1 |
| AAF06143.1 | YcagPBP | CAA64445.1  | BmorGOBP2 | AII01008.1  | DkikOBP3 | ANZ73034.1  | CsupOBP4 |
| AAF06142.1 |  SexiPBP | CAA64444.1  | BmorGOBP1 | AII01006.1  | DkikOBP4 | ANZ73033.1 | CsupOBP1 |
| AAF06141.1  | PgosPBP | NP\_001140190.1  | BmorOBP6 | AII01004.1  | DkikOBP5 |  |  |
| AAF06140.1  | CrosPBP1 | NP\_001140188.1  | BmorOBP4 | AII01002.1  | DkikOBP6 |  |  |
| AAF06139.1  | CrosPBP2 | NP\_001140185.1  | BmorOBP1 | AII01001.1  | DkikOBP7 |  |  |
| AAF06138.1 |  CpinPBP1 | NP\_001159622.2  | BmorOBP56d | AII01000.1  | DkikOBP8 |  |  |
| AAF06137.1 |  CrosPBP | XP\_021204926.1  | BmorOBP1X1 | AII00999.1  | DkikOBP9 |  |  |
| AAF06136.1 | Cpin PBP2 | XP\_012547442.1  | BmorOBP6X1 | AII00998.1  | DkikOBP10 |  |  |
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| AAF06134.1  | CparPBP1 | CAS90130.1  | BmorOBP6 | AII00995.1  | DkikOBP12 |  |  |
| AAF06133.1  | CparPBP2 | CAS90128.1  | BmorOBP4 | AII00994.1  | DkikOBP13 |  |  |
| AAF06132.1 |  CmurPBP1 | CAS90125.1  | BmorOBP1 | AII00993.1  | DkikOBP14 |  |  |
| AAF06131.1 |  CmurPBP2 | EFA02853.2 | TcasOBP16 | AII00992.1  | DkikOBP15 |  |  |
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| AAF06129.1 |  CfumPBP1 | EFA04747.2  | TcasOBP25 | AII00990.1  | DkikOBP17 |  |  |
| AAF06128.1 |  CfumPBP2 | EFA04687.2  | TcasOBP8 | AII00989.1  | DkikOBP18 |  |  |
| AAF06127.1 |  CfumPBP3 | EFA05793.2  | TcasOBP20 | AII00988.1  | DkikOBP19 |  |  |
| AAF06126.1  | AvelPBP1 | EFA05676.2  | TcasOBP2 | AGJ83357.1  | DkikGOBP1 |  |  |
| AAF06125.1  | AvelPBP2 | EFA09215.2  | TcasOBP21 | AGJ83353.1 | DkikGOBP2 |  |  |
| AAF06124.1  | AvelPBP3 |  EFA09155.2  | TcasOBP22 | ACX53761.1  | HvirOBP1 |  |  |
| AAC36315.1  | HzeaPBP | EFA12066.1  | TcasOBP15 | ACX53748.1  | HvirOBP2 |  |  |
| BAF64703.1  | AselPBP2  | EFA10803.1  | TcasOBP23 | ACX53819.1  | HvirOBP3 |  |  |
| AAX85460.1  | AsegPBP2 | EFA10713.1  | TcasOBP9 | ACX53795.1  | HvirOBP4 |  |  |
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| GR | GR |
| **GI** | **Name** | **GI** | **Name** |
| 429545903 | HarmGRa  | 47117920 | DmelGR43a |
| 666916233 | HarmGRb | 17986119 |  DmelGR61a |
| 666916229 | HarmGRc  | 24657115 |  DmelGR64a  |
| 666916227 | HarmGRd | 118500892 |  DmelGR21a  |
| 666916225 | HarmGRe  | 24639922 | DmelGR5a |
| 486139707 | HarmGR5 | 281365837 | DmelGR66a  |
| 486139682 | HarmGR4 | 221330835 | DmelGR63a  |
| 486139658 | HarmGR1 | 45549158 | DmelGR32a |
| 221136983 | TcasGRa | 45551511 | DmelGR64f  |
| 163716784 | TcasGRb | 24662881 | DmelGR68a  |
| 163716754 | TcasGRc | 45549284 | DmelGR33a |
| 270006491 |  TcasGR178 | 24648814 | DmelGR93a  |
| 270006483 |  TcasGR 97  | 17986103 | DmelGR57a  |
| 270006476 | TcasGR 2 | 45549155 | DmelGR28a  |
| 270015820 | TcasGR 26  | 24641287 | DmelGR10a  |
| 270015819 |  TcasGR 27  | 28571153 | DmelGR8a  |
| 270011186 | TcasGR 168 | 28573623 | DmelGR59f  |
| 270011184 |  TcasGR 154 | 24585658 | DmelGR39b  |
| 270011183 |  TcasGR 153 | 24649189 | DmelGR94a  |
| 270011173 | TcasGR 125  | 28573606 | DmelGR58c  |
| 270011167 | TcasGR 118 | 45550994 | DmelGR36a  |
| 270011166 | TcasGR 117 | 24580943 | DmelGR22a |
| 270011146 | TcasGR 1  | 24667642 | DmelGR77a  |
| 270009311 | TcasGR 24  | 45551079 | DmelGR47b |
| 270008279 | TcasGR 166 | 45550757 | DmelGR89a  |
| 270008276 | TcasGR 18 | 24650640 | DmelGR98d  |
| 270008272 | TcasGR 14 | 45551934 | DmelGR92a  |
| 270008271 | TcasGR 13  | 24645557 | DmelGR85a  |
| 270008270 | TcasGR 12 | 17986021 | DmelGR10b  |
| 270008269 |  TcasGR 11 | 24640947 | DmelGR9a |
| 270008268 | TcasGR 10  | 350536295 | BmorGR68 |
| 270008265 | TcasGR 7 | 350536275 | BmorGR67 |
| 270008263 | TcasGR 5 | 195963349 | BmorGR60 |
| 270008261 |  TcasGR 3 | 195963347 | BmorGR45 |
| 270002945 | TcasGR 164 | 195963345 | BmorGR9 |
| 270002937 | TcasGR 87  | 195963343 | BmorGR8 |
| 224458358 | TcasGR82 | 912719236 | BmorGR10 |
| 571550487 | AmelGR7 |  |  |
| 339715206 | AmelGR10 |  |  |
| 571550434 | AmelGR32 |  |  |
| 571529490 | AmelGR64f |  |  |
| 328778564 | AmelGR43a |  |  |