S4 Table: Candidate genes for sex-determination and reproduction in *C. plicata* transcriptome

|  |  |  |
| --- | --- | --- |
| Protein family | Unigene ID | Length (bp) |
| Sex-determination and differentiation related | | |
| WD repeat and HMG-box DNA-binding protein 1 | Cp\_Uni\_029636 | 4196 |
| HMG-box transcriptional regulator | Cp\_Uni\_157480 | 365 |
| Wnt 4 protein | Cp\_Uni\_096208 | 1658 |
| Steroidogenic factor-1 like isoform | Cp\_Uni\_165678; Cp\_Uni\_165679; Cp\_Uni\_282653 | 4483; 4443; 3650 |
| DAX1 | Cp\_Uni\_022940 | 2246 |
| SOX-5 | Cp\_Uni\_004071; Cp\_Uni\_004072; Cp\_Uni\_004073; Cp\_Uni\_004074 | 3530; 3150; 3253; 3639 |
| SOX-6 | Cp\_Uni\_157889 | 393 |
| SOX-9 | Cp\_Uni\_157481 | 4159 |
| SOX-11 | Cp\_Uni\_318595 | 2273 |
| SOX-15 | Cp\_Uni\_297074 | 2396 |
| SOXB2 | Cp\_Uni\_020182 | 1633 |
| DMRT1-testis specific | Cp\_Uni\_233275 | 1414 |
| Doublesex and mab-3 related transcription factor | Cp\_Uni\_366611; Cp\_Uni\_044057; Cp\_Uni\_070130; Cp\_Uni\_025914; Cp\_Uni\_238157; Cp\_Uni\_238158; Cp\_Uni\_302545; Cp\_Uni\_279873;  Cp\_Uni\_279874; Cp\_Uni\_279875 | 1489; 2418; 2273; 1790; 1781; 1844; 1641; 1053; 872; 739 |
| Sex comb on midleg-like protein 2 | Cp\_Uni\_083210 | 3596 |
| Complementary sex determiner | Cp\_Uni\_198143; Cp\_Uni\_198144 | 555; 579 |
| WNT | Cp\_Uni\_232160; Cp\_Uni\_063623; Cp\_Uni\_112457; Cp\_Uni\_292411; Cp\_Uni\_019431; Cp\_Uni\_016481; Cp\_Uni\_096208; Cp\_Uni\_130353; Cp\_Uni\_130354; Cp\_Uni\_020943; Cp\_Uni\_293849; Cp\_Uni\_148172; Cp\_Uni\_043153; | 2211; 1529; 1698; 2188; 2950; 3597; 1658; 1720; 1553; 2792; 5476; 3465; 1028; |
| Sex determining protein Fem-1 like protein | Cp\_Uni\_013399 | 2058 |
| Sex determining region Y protein-like isoform | Cp\_Uni\_001001 | 621 |
| Reproduction related | | |
| Motile sperm domain-containing protein 2 | Cp\_Uni\_012929; Cp\_Uni\_019096 | 3731; 4078 |
| Oocyte zinc finger protein | Cp\_Uni\_054497 | 590 |
| Sperm flagellar protein 1 | Cp\_Uni\_199947; Cp\_Uni\_199949; Cp\_Uni\_009524; Cp\_Uni\_199946; Cp\_Uni\_009523; Cp\_Uni\_009257; Cp\_Uni\_199950; Cp\_Uni\_146491; Cp\_Uni\_146495; Cp\_Uni\_146492; Cp\_Uni\_146494; Cp\_Uni\_146493; Cp\_Uni\_146496; Cp\_Uni\_258195; Cp\_Uni\_199951; Cp\_Uni\_199948;  Cp\_Uni\_258193; Cp\_Uni\_258194 | 3075; 3097; 1310; 1507;  1301; 5903; 2561; 1259; 1235; 1223; 1199; 777; 1187; 2100; 528; 3111; 856; 838 |
| Sperm flagellar protein 2 | Cp\_Uni\_258193; Cp\_Uni\_258194 | 856; 838 |
| Sperm motility kinase | Cp\_Uni\_113317; Cp\_Uni\_105298 | 2097; 4341 |
| Nuclear autoantigenic sperm protein | Cp\_Uni\_022427 | 1792 |
| Vitelline envelope sperm lysin receptor | Cp\_Uni\_114551 | 230 |
| Spermatogenesis-associated protein 1 | Cp\_Uni\_17123; Cp\_Uni\_171300; Cp\_Uni\_171308; Cp\_Uni\_171294; Cp\_Uni\_171306; Cp\_Uni\_171307; Cp\_Uni\_171280; Cp\_Uni\_171286; Cp\_Uni\_171303; | 3293; 3242; 3215; 3140; 3071; 2993; 2891; 3044; 2966; |
| Spermatogenesis-associated protein 7 | Cp\_Uni\_186358 | 2864 |
| Spermatogenesis-associated protein 4 | Cp\_Uni\_226086; Cp\_Uni\_226087 | 2650; 2631; |
| Spermatogenesis-associated protein 6 | Cp\_Uni\_158029; Cp\_Uni\_158023; Cp\_Uni\_158022; Cp\_Uni\_158028; Cp\_Uni\_158026 | 2438; 2452; 2410; 2386; 2344 |
| Spermatogenesis-associated protein 5 | Cp\_Uni\_027692; Cp\_Uni\_201263 | 2655; 1583 |
| Prostatic spermine-binding protein-like | Cp\_Uni\_243779; Cp\_Uni\_079128 | 611; 241 |
| Sperm-associated antigen 17-like | Cp\_Uni\_184717; Cp\_Uni\_184727; Cp\_Uni\_184716; Cp\_Uni\_184718;  Cp\_Uni\_184719; Cp\_Uni\_184723; Cp\_Uni\_184721; Cp\_Uni\_184722; Cp\_Uni\_027630; Cp\_Uni\_184720; Cp\_Uni\_184726 | 8879; 8935; 8791; 8735; 8855; 8911; 8767; 8711; 6371; 7204; 7148 |
| Spermidine synthase-like | Cp\_Uni\_257590; Cp\_Uni\_257595; Cp\_Uni\_257601; Cp\_Uni\_257604; Cp\_Uni\_013162; Cp\_Uni\_210472; Cp\_Uni\_210473; Cp\_Uni\_210474; Cp\_Uni\_210475 | 1832; 1733; 1705; 1672; 2737; 663; 757; 594; 1233 |
| Spermine oxidase-like | Cp\_Uni\_027816 | 3700 |
| Testis beta tubulin | Cp\_Uni\_246058 | 539 |
| Vitellogenin | Cp\_Uni\_091945; Cp\_Uni\_362950; Cp\_Uni\_248742; Cp\_Uni\_024626; Cp\_Uni\_064837; Cp\_Uni\_126430; Cp\_Uni\_219658; Cp\_Uni\_197581; Cp\_Uni\_044443; Cp\_Uni\_054115; Cp\_Uni\_372011; Cp\_Uni\_097211; Cp\_Uni\_134578; Cp\_Uni\_182033; Cp\_Uni\_153648; Cp\_Uni\_144055; Cp\_Uni\_334164; Cp\_Uni\_366163 | 7807; 284; 1005; 1228; 1046; 464; 878; 814; 848; 703; 657; 321; 292; 290; 671; 236; 250; 235 |
| Vitelline envelope zona pellucida domain 14 | Cp\_Uni\_135173; Cp\_Uni\_078868; Cp\_Uni\_317597; Cp\_Uni\_219154; Cp\_Uni\_353750 | 272; 650; 244; 226; 261 |
| Ovary development-related protein | Cp\_Uni\_040133; Cp\_Uni\_094758; Cp\_Uni\_277820; Cp\_Uni\_127348 | 444, 376, 554; 263 |