```
•Lcom | lcpid174709 | OG4 |
                   Stedip EP00041_Stephanoeca_diplocostata_P014978 | OG1 |
     79
                  Lcom Icpid224434 | OG1 |
 79
               Lcom_lcpid179370 | OG2 |
                 Lcom_lcpid143462 | OG2 |
   92
                     Lcom | lcpid98770 | OG3 |
                         Lcom | lcpid214902 | OG3 |
                    Lcom_lcpid91597 | OG3 |
                      Lcom_lcpid218753 | OG3 |
                      -Codhol EP00042_Codosiga_hollandica_P020107 | OG3 |
       83
                     Salurc EP00051 Salpingoeca urceolata P026447 | OG3 |
             93
                     Salmac EP00052 Salpingoeca macrocollata P011828 | OG3 |
         90
                        •Mbre_EDQ92005 | OG3 |
                       Choper_EP00045_Choanoeca_perplexa_P016097 | OG3 |
             90
                          Salinf EP00049 Salpingoeca infusionum P018724 | OG3 |
                               rEmue_Em0017g520a.t1 | OG3 |
                             <sup>100</sup>Lemue_Em1158g2a.t1 | OG3 |
               •Hvul_g20074_1 | OG0 |
       100
                 Morvir scaffold243.g32.t1 | OG0 |
    100
                    •Sanmal Sma 024945-T1 | OG0 |
       100
                •Nemnom_g14870.t1 | OG0 |
          100
             <sup>100</sup><sup>1</sup>-Rhoesc_Res_011063-T1 | OG0 |
                 Ctel gnl WGS AMQN_CAPTEDRAFT_mRNA156627 | OG0 |
         88
                     •Tcas TC030051 001 | OG0 |
                 Acagra model.g15725.t1.1.5d3b8822 | OG0 |
         100
                   •Cgig_XM_034443391.1 | OG0 |
                  Skow_XM_002731391.2 | OG0 |
               <sup>1001</sup>•Skow XM 002739729.2 | OG0 |
     85
                  Bralan BLAG03001363 1 | OG0 |
           87
                    Spur XM 011663023.2 | OG0 |
 79
                    •Dpul_mRNA19867 | OG0 |
           98
                        •Hsap_ENST00000338128 | OG0 |
                  •Cscu XM 023361350.1 | OG0 |
              <sup>100</sup>L-Cscu_XM_023361356.1 | OG0 |
                 Exapal_XM_021036688.2 | OG0 |
                 •Nvec v1g229609 | OG0 |
                  Dgig_XM_028543340.1 | OG0 |
                  •Xesp 001881-T1 | OG0 |
       98
              Gfas_gfas1.m1.16237.m1 | OG0 |
                  -Adig XM 015894981.1 | OG0 |
                    •Amil_Amillepora33756-RA | OG0 |
         100
   69
                 98<sup>1</sup>-Adig XM_015917683.1 | OG0 |
            52
                 •Gfas gfas1.m1.22431.m1 | OG0 |
                     •Spis XP 022782256 1 | OG0 |
                  •Gasp_gasp1.m3.24353.m1 | OG0 |
                    88
                                     •Gfas_gfas1.m1.21386.m1 | OG0 |
                      Fspp ffun1.m4.8724.m1 | OG0 |
                    88 Gasp gasp1.m3.24352.m1 | OG0 |
                   •Plespi_Pspi_scaffold13017_01 | OG0 |
                     •TrH2_TrispH2_011197-RA | OG0 |
                        <sub>"</sub>HoiH23_PIH23_011298-RA | OG0 |
                 100
                     <sup>100</sup>-HoiH06 mRNA11613 | OG0 |
         86
                        Hhon g06546.t1 | OG0 |
                      <sup>100</sup> HoiH04 mRNA6924 | OG0 |
     65
                       Clacor Ccor C541499 01 | OG0 |
                         Lcom_lcpid34941 | OG0 |
           88
                           Lcom |cpid25618 | OG0 |
                100
                      100
                         <sup>81</sup>Ū-Lcom Icpid34939 | OG0 |
                   100
                           Leuniv Lniv scaffold16273 01 | OG0 |
                                _scict016160.3 | OG0 |
                              <sub>!</sub>Gracom_Gcom_scaffold13116_01 | OG0 |
             93
                            <sup>100</sup>Gracom_Gcom_scaffold13117_01 | OG0 |
                         •Tetwil g25051.t1 | OG0 |
                  100
                         Stycar_maker-SC_scaffold2183-snap-gene-0.4-mRNA-1 | OG0 |
                        •Xestes_maker-XT_scaffold801-augustus-gene-0.3-mRNA-1 | OG0 |
               100
                          Halamb_c51111_g1_i1m.29816 | OG0 |
                            -Halamb_c2394_g1_i1m.361 | OG0 |
                  75
                             Aque Aqu2.1.33423 001 | OG0 |
                                  -Halamb_c23278_g1_i1m.4228 | OG0 |
                    73
                                 •Aque_Aqu2.1.39717_001 | OG0 |
                            •Spolac_c103606_g1_i1_m.35127c103606-g1 | OG0 |
       51
                              <u>•</u>Emue_Em0017g521a.t1 | OG0 |
                                 •Emue_Em1158g1a.t1 | OG0 |
                                      •Emue_Em0017g507a.t1 | OG0 |
                              100
                                       Emue Em0017g515a.t1 | OG0 |
                                  100
                                         Emue_Em0017g509a.t1 | OG0 |
                                       <sup>95</sup> Emue_Em0017g516a.t1 | OG0 |
                              •Plajan Pjan scaffold7022 01 | OG0 |
                              •Plajan_Pjan_scaffold7023_01 | OG0 |
                   •Ocar_g9231 | OG0 |
                     -Ocar_g9230 | OG0 |
                  <sup>73</sup> Opea_EP00118_Oscarella_pearsei_P025125 | OG0 |
                        Plajan Pjan scaffold14738 01 | OG0 |
                           Plajan_Pjan_scaffold14739_01 | OG0 |
                         <sup>1001</sup>Plajan_Pjan_scaffold14740_01 | OG0 |
                        -Eupdun_Edun_sb10668029 | OG0 |
                         Eupdun_Edun_sb10668028 | OG0 |
                          Eupdun_Edun_sb10668034 | OG0 |
                           Eupdun_Edun_sb10668022 | OG0 |
         76
                             Eupdun_Edun_sb10668027 | OG0 |
                            15
                             <sup>11</sup>Eupdun_Edun_sb10668021 | OG0 |
                        <u>•</u>Eupdun_Edun_sb10668020 | OG0 |
                           Eupdun_Edun_sb10668023 | OG0 |
                           <sup>1</sup>-Eupdun_Edun_sb10668037 | OG0 |
                  100
                            Eupdun_Edun_sb10668035 | OG0 |
                              Eupdun_Edun_sb10668038 | OG0 |
                                Eupdun_Edun_sb10668024 | OG0 |
           57
                              <sup>85</sup>Leupdun_Edun_sb10668033 | OG0 |
                       •Eupdun_Edun_sb10668031 | OG0 |
                         •Eupdun Edun sb10668036 | OG0 |
                                 Eupdun_Edun_sb10668043 | OG0 |
                       37
                                   [Eupdun_Edun_sb10668045 | OG0 |
                         22
                                 82 Eupdun_Edun_sb10668046 | OG0 |
                                   Eupdun_Edun_sb10668026 | OG0 |
                                 79<mark>* •</mark>Eupdun Edun sb10668019 | OG0 |
                                   <sup>1</sup>-Eupdun_Edun_sb10668042 | OG0 |
                                   [Eupdun_Edun_sb10668040 | OG0 |
                                 <sup>1]</sup>Eupdun Edun sb10668041 | OG0 |
                                 <sub>f</sub>Eupdun_Edun_sb10668018 | OG0 |
                                   13
                                        <u>•</u>Eupdun_Edun_sb10668048 | OG0 |
                                      <sup>581</sup>Eupdun_Edun_sb10668049 | OG0 |
                                        Eupdun_Edun_sb10668055 | OG0 |
                                   100
                                            Eupdun Edun sb10668047 | OG0 |
                                             Eupdun Edun sb10668044 | OG0 |
                                            1-Eupdun Edun sb10668053 | OG0 |
                                            Eupdun_Edun_sb10668052 | OG0 |
                                          <sup>1]</sup>Eupdun_Edun_sb10668054 | OG0 |
                        -Lampan_Lpan_15132 01 | OG0 |
                           Coemet_Cmet_C605156_01 | OG0 |
                              •Coeast_Cast_sb796361 | OG0 |
                        100
                           <sup>100</sup> Coeast_Cast_sb796362 | OG0 |
                     100
                           Vmul sbMO455843 | OG0 |
                              -Vmul_sbMO455848 | OG0 |
                           <sup>100</sup>└•Vmul_sbMO455846 | OG0 |
                           Bolinf Binf sb1274670 | OG0 |
                         <sup>74]</sup>•Bolinf Binf sb1274674 | OG0 |
                           Mertsp Mesp sb601525 | OG0 |
                         <sup>91</sup> Mertsp Mesp_sb601526 | OG0 |
                 78
                     98
                           Bolinf Binf sb1274671 | OG0 |
                         Bolinf Binf sb1274675 | OG0 |
                             Bolinf Binf sb1274676 | OG0 |
                            95 Bolinf Binf sb1274677 | OG0 |
                            •Vmul_sbMO405193 | OG0 |
                              Mlei_ML0955.g5.i1 | OG0 |
                            <sup>701</sup>Vmul_sbMO378548 | OG0 |
                   86
                                Drygla Dgla sb306366 | OG0 |
                              <sup>77</sup> Drygla_Dgla_sb306367 | OG0 |
                                Drygla_Dgla_sb306369 | OG0 |
                              <sup>97</sup> Drygla_Dgla_sb306368 | OG0 |
                                Beraby_Baby_sb324240 | OG0 |
                                  Coeast Cast sb802231 | OG0 |
                                    •Pbac_sb2663255 | OG0 |
                     80
                                       Horcal_Hcv1.av93.c6.g549.i1 | OG0 |
                                    <sup>100</sup>Ū-Coeast Cast_sb802235 | OG0 |
                          •Mertsp_Mesp_sb601530 | OG0 |
                               -Bolinf Binf sb1274678 | OG0 |
                           <sup>96</sup> Bolinf Binf_sb1274679 | OG0 |
                                Bolinf_Binf_sb1274664 | OG0 |
                              69 Bolinf Binf sb1274666 | OG0 |
                         87
                                 Bolinf_Binf_sb1274673 | OG0 |
                                  Bolinf Binf sb1274672 | OG0 |
                           59
                                   Bolinf Binf sb1274665 | OG0 |
                                    Bolinf_Binf_sb1274662 | OG0 |
                                    <sup>1</sup>•Bolinf_Binf_sb1274667 | OG0 |
                                  Bolinf Binf sb1274663 | OG0 |
                                    Mertsp Mesp sb601529 | OG0 |
                                      -Mertsp_Mesp_sb601534 | OG0 |
                                       Mertsp_Mesp_sb601527 | OG0 |
                                         Bolinf_Binf_sb1274668 | OG0 |
                                       981 Bolinf Binf sb1274669 | OG0 |
0.416667
```