```
•Tcas_TC013519_001 | OG0 |
                                Saldol_EP00054_Salpingoeca_dolichothecata_P012169 | OG0 |
                                    •Acaspe EP00035 Acanthoeca spectabilis P022191 | OG0 |
                               <sup>100</sup>□-Helnan_EP00037_Helgoeca_nana_P015131 | OG0 |
                Tetwil g19908.t1 | OG1 |
                   •Emue_Em0012g1096a.t1 | OG1 |
       96
                   -Spolac_c100308_g2_i1_m.22074c100308-g2 | OG1 |
    99
                  Xestes_maker-XT_scaffold15200-augustus-gene-0.66-mRNA-1 | OG1 |
                 Halamb_c51637_g1_i6mm.4078 | OG1 |
        100
                  <sub>•</sub>Aque_Aqu2.1.25694_001 | OG1 |
           100
               <sup>1001</sup>-Aque_Aqu2.1.04512_001 | OG1 |
                       Salinf_EP00049_Salpingoeca_infusionum_P018037 | OG1 |
  64
                       •Sros_EGD77348 | OG1 |
            99
                       Microa_EP00043_Microstomoeca_roanoka_P004582                                  | OG1 |
         99
                     Mbre_EDQ85127 | OG1 |
                     Chofle EP00730 Choanoeca flexa P013941 | OG1 |
                    •Choper_EP00045_Choanoeca_perplexa_P005651 | OG1 |
                   Salmac_EP00052_Salpingoeca_macrocollata_P030646 | OG1 |
     93
                        Salurc_EP00051_Salpingoeca_urceolata_P035179 | OG1 |
                       Mylflu EP00047 Mylnosiga fluctuans P001910 | OG1 |
                        Salpun EP00053_Salpingoeca_punica_P007365 | OG1 |
        84
                       -Saldol_EP00054_Salpingoeca_dolichothecata_P016240 | OG1 |
                         ·Codhol_EP00042_Codosiga_hollandica_P014427 | OG1 |
              78
                                •Lcom_lcpid134881 | OG1 |
                            Salkve_EP00050_Salpingoeca_kvevrii_P017390 | OG1 |
            59
                            Didcos EP00039 Didymoeca costata P016239 | OG1 |
              72
                                               •Microa_EP00043_Microstomoeca_roanoka_P007252 | OG1 |
                                             •Sros EGD75673 | OG1 |
                62
55
                            Diagra_EP00040_Diaphanoeca_grandis_P024141 | OG1 |
                            -Stedip_EP00041_Stephanoeca_diplocostata_P015602 | OG1 |
                               Acaspe EP00035 Acanthoeca spectabilis P020492 | OG1 |
                               •Helnan EP00037 Helgoeca nana P009090 | OG1 |
                  Clacor_Ccor_scaffold14159_01 | OG2 |
                   •Lcom_lcpid74393 | OG2 |
        100
                        Leuniv_Lniv_C810120_01 | OG2 |
             100
                          Gracom Gcom_scaffold13352_01 | OG2 |
                100
                       <sub>f</sub>Scil_scict016803.1 | OG2 |
    48
                    <sup>100</sup> Lcom_lcpid215947 | OG2
                 TrH2 TrispH2 010371-RA | OG2 |
              <sup>100</sup> Tadh_TriadT54211 | OG2 |
                 •HoiH11 mRNA4309 | OG2 |
           100
                     <sub>"</sub>HoiH23_PIH23_009879-RA | OG2 |
              98
                  <sup>100</sup><sup>-</sup>HoiH06_mRNA14395 | OG2 |
                     <sub>e</sub>Hhon_g00589.t1 | OG2 |
  47
                  <sup>100</sup> HoiH04 _mRNA5136 | OG2 |
                           •Ctel_gnl_WGS_AMQN_CAPTEDRAFT_mRNA128223 | OG2 |
                 •Plajan_Pjan_C560035_01 | OG2 |
                  Opea_EP00118_Oscarella_pearsei_P001076 | OG2 |
                •Hsap ENST00000260956 | OG2 |
                   Spur_XM_030974234.1 | OG2 |
    63
                     Skow_XM_002734267.2 | OG2 |
                      •Bralan_BLAG17000936_1 | OG2 |
                      -Morvir_scaffold685.g5.t1 | OG2 |
                          •Chem_TCONS_00024474 | OG2 |
          55
                         Hvul g21810 1 | OG2 |
      49
               100
                     <sup>100</sup> Hvul_g21814_1 | OG2 |
            93
                        •Aaur_scaffold2522.g4.t1 | OG2 |
                        •Nemnom_g2983.t1 | OG2 |
                   <sup>100</sup><sup>_</sup>-Rhoesc_Res_004275-T1 | OG2 |
                        •Xesp_022033-T1 | OG2 |
                        Dgig_XM_028561613.1 | OG2 |
                100
                           Dgig_XM_028547105.1 | OG2 |
                        •Exapal_XM_021061098.2 | OG2 |
          55
                       •Nvec_v1g224449 | OG2 |
                   <sup>100</sup> Nvec_v1g236578 | OG2 |
                    •Gfas_gfas1.m1.21897.m1 | OG2 |
             99
                            •Adig_XM_015904134.1 | OG2 |
                           <sub>•</sub>Amil_Amillepora33581-RA | OG2 |
               100
                        <sup>100</sup> Amil_Amillepora33576-RA | OG2 |
                  88
                               •Fspp ffun1.m4.16331.m1 | OG2 |
                          Gasp gasp1.m3.18851.m1 | OG2 |
                          •Spis_XP_022777450_1 | OG2 |
                      <sup>100</sup><sup>1</sup>•Pocdam_XM_027193505.1 | OG2 |
             Acagra_model.g23079.t1.1.5d3b8abc | OG3 |
    92
               ·Ctel_gnl_WGS_AMQN_CAPTEDRAFT_mRNA173881 | OG3 |
  88
              •Cgig_XM_034446472.1 | OG3 |
     99
              Lcom_lcpid123236 | OG3 |
                     •Lcom_lcpid111324 | OG4 |
                   •Cscu_XM_023371731.1 | OG4 |
    73
62
                   -•Dpul_mRNA16660 | OG4 |
                  <sup>100</sup>lEupdun_Edun_sb10665175 | OG4 |
                      -Lampan_Lpan_14152_01 | OG4 |
                   <sup>1001</sup>-Lampan_Lpan_14153_01 | OG4 |
  44
                        <sub>•</sub>Vmul_SimC394166 | OG4 |
              73
                            •Vmul_sbMO443900 | OG4 |
                     100
                        <sup>100</sup>1─•Vmul_sbMO443893 | OG4 |
                 100
                         •Coemet_Cmet_scaffold4255_01 | OG4 |
         100
                         •Coeast_Cast_sb811637 | OG4 |
                    100
                             <u>r</u>Coeast_Cast_sb811633 | OG4 |
                           75
                                 <sub>!</sub>Coeast_Cast_sb811635 | OG4 |
                               <sup>99</sup> Coeast_Cast_sb811639 | OG4 |
                             Coeast_Cast_sb811636 | OG4 |
                                  rCoeast_Cast_sb811638 | OG4 |
                                   _Coeast_Cast_sb811640 | OG4 |
                                  <sup>851</sup>•Coeast_Cast_sb811641 | OG4 |
                     Mertsp_Mesp_sb577998 | OG4 |
                  100
                           Bolinf_Binf_sb1242850 | OG4 |
                         <sup>681</sup>Mertsp_Mesp_sb577999 | OG4 |
                           Mertsp_Mesp_sb577996 | OG4
                         99<sup>1</sup>Mertsp_Mesp_sb577997 | OG4 |
                         Coeast_Cast_sb762903 | OG4 |
                             •Pbac_sb2663336 | OG4 |
                      100
                              Pbac_sb2654896 | OG4 |
                                Horcal Hcv1.av93.c12.g452.i1 | OG4 |
                               <sup>95</sup> Horcal_Hcv1.av93.c12.g452.i2 | OG4 |
                           •Drygla_Dgla_sb294363 | OG4 |
                79
                             Bolinf_Binf_sb1302725 | OG4 |
                              Beraby Baby sb344947 | OG4 |
                             <sup>75]</sup>Beraby_Baby_sb344948 | OG4 |
                           rMlei_ML0405.g15.i1 | OG4 |
                        <sup>100</sup> Vmul_sbMO451986 | OG4 |
                  90
                              Bolinf_Binf_sb1279816 | OG4 |
                                Bolinf_Binf_sb1279785 | OG4
                               <sup>1</sup> Mertsp_Mesp_sb583983 | OG4 |
                           48
                     100
                               Bolinf Binf sb1279819 | OG4 |
                                    Bolinf Binf sb1279805 | OG4 |
                                 <sup>1001</sup>Mertsp_Mesp_sb583990 | OG4 |
                                   Bolinf_Binf_sb1279796 | OG4 |
                                        <sub>!</sub>Bolinf_Binf_sb1279799 | OG4 |
                        100
                                     <sup>661</sup>Mertsp_Mesp_sb583986 | OG4 |
                                        Bolinf Binf sb1279794 | OG4 |
                                     87 | Mertsp_Mesp_sb583993 | OG4 |
                               Bolinf_Binf_sb1279788 | OG4 |
                             <sup>701</sup>Mertsp_Mesp_sb583977 | OG4 |
                               Mertsp Mesp sb583982 | OG4 |
                                 Bolinf Binf sb1279782 | OG4 |
                                   Bolinf Binf sb1279780 | OG4 |
                                       Mertsp_Mesp_sb583978 | OG4 |
                                        Bolinf_Binf_sb1279783 | OG4 |
                                         Mertsp Mesp sb583989 | OG4 |
                                          Bolinf Binf sb1279777 | OG4 |
                                         Mertsp_Mesp_sb583974 | OG4 |
                                        Mertsp_Mesp_sb583987 | OG4 |
                                          Mertsp Mesp sb583981 | OG4 |
                                           Bolinf_Binf_sb1279781 | OG4 |
                                            Bolinf_Binf_sb1279786 | OG4 |
                                             Mertsp Mesp sb583973 | OG4 |
                                               Mertsp Mesp sb583976 | OG4 |
                                                *Bolinf Binf sb1279776 | OG4 |
                                               1 Bolinf_Binf_sb1279779 | OG4 |
```