```
Eupdun_Edun_sb10614442 | OG0 |
                   -Coeast_Cast_sb776775 | OG0 |
     100
                  -Lampan_Lpan_15111_01 | OG0 |
         94
                     Bolinf Binf sb1266831 | OG0 |
                  <sup>100</sup> Mertsp Mesp_sb581009 | OG0 |
           81
                         Beraby_Baby_sb345414 | OG0 |
                           Mlei_ML0508.g23.i1 | OG0 |
                  86
                        <sup>100</sup> Vmul_sbMO421277 | OG0 |
             90
                     100
                          <u>•</u>Drygla_Dgla_sb304551 | OG0 |
62
                  53
                                <sub>"</sub>-Pbac_sb2663830 | OG0 |
  88
          94
    98
         76
              80
              92
       95
              100
         69
              85
           73
                          Lcom_lcpid186992 | OG0 |
                           Lcom | cpid228141 | OG0 |
              82
                       100
                   94
                                •Sros EGD81004 | OG0 |
                •Plajan_Pjan_C566742_01 | OG1 |
       100
              <sup>100</sup>Ū-Ocar_g1076 | OG1 |
  47
                Clacor_Ccor_scaffold2502_01 | OG1 |
      100
                      •Scil_scict005239.1 | OG1 |
            100
                       •Lcom_lcpid59525 | OG1 |
                       -Leuniv_Lniv_C809210_01 | OG1 |
                  •Plespi Pspi scaffold20823 01 | OG1 |
                         •Tetwil g26791.t1 | OG1 |
          95
    100
            98
        99
62
               98
            100
                        Aque_Aqu2.1.27181_001 | OG1 |
               99
                      <sup>961</sup>•Aque Aqu2.1.05825_001 | OG1 |
                        •Xesp 005090-T1 | OG1 |
                     Dgig_XM_028562083.1 | OG1 |
             100
                  <sup>100</sup> Dgig_XM_028560649.1 | OG1 |
  52
                    •Morvir_scaffold246.g34.t1 | OG1 |
                       •Hvul_g32819_1 | OG1 |
                        •Sanmal Sma 019091-T1|OG1|
       80
                         •Aaur_scaffold1278.g6.t1 | OG1 |
                100
                    100
                              <sub>!</sub>Nemnom_g15275.t1 | OG1 |
                           <sup>1001</sup>•Nemnom_g15270.t1 | OG1 |
         99
                     Exapal XM 021057518.2 | OG1 |
                     •Nvec_NVE21336 | OG1 |
              100
                       Nvec_v1g171280 | OG1 |
                     68<sup>1</sup>Nvec_v1g225758 | OG1 |
                       <sub>f</sub>-Adig_XM_015899427.1 | OG1 |
           93
                    <sup>100</sup> Amil Amillepora21960-RA | OG1 |
                        •Gfas_gfas1.m1.13650.m1 | OG1 |
              100
                         •Spis_XP_022785824_1 | OG1 |
                 100
                      <sup>100</sup><sup>-</sup>Tadh_TriadT50671 | OG1 |
               100
                      •HoiH11_mRNA3048 | OG1 |
                       <sup>87</sup>-HoiH06_mRNA2071 | OG1 |
                          Hhon g00756.t1 | OG1 |
                       <sup>1001</sup>-HoiH04 mRNA16105 | OG1 |
                        •Skow_XM_002730835.2 | OG1 |
                       Spur_XM_030992011.1 | OG1 |
           69
                    <sup>1001</sup>Spur_XM_030992031.1 | OG1 |
                       Bralan_BLAG01001932_1 | OG1 |
         94
           48
              50
                        100
                99
                   100
                        100
                           98
                              99
```

```
Toemet_Cmet_scaffold16190_01 | OG0 |
          Mertsp Mesp sb549694 | OG0 |
            Bolinf Binf sb1231223 | OG0 |
          90 Bolinf Binf sb1231224 | OG0 |
            Drygla_Dgla_sb304552 | OG0 |
          <sup>100</sup> Drygla_Dgla_sb304553 | OG0 |
                Horcal_Hcv1.av93.c12.g95.i1 | OG0 |
              <sup>97</sup> Horcal_Hcv1.av93.c12.g95.i2 | OG0 |
                                 -Spur_XM_030991494.1 | OG0 |
   Diagra EP00040 Diaphanoeca grandis P020356 | OG0 |
    Stedip EP00041 Stephanoeca diplocostata P017571 | OG0 |
       -Stedip_EP00041_Stephanoeca_diplocostata_P017572 | OG0 |
        Didcos_EP00039_Didymoeca_costata_P007560 | OG0 |
           •Diagra_EP00040_Diaphanoeca_grandis_P020353 | OG0 |
        Acaspe EP00035 Acanthoeca spectabilis P035766 | OG0 |
        Helnan EP00037 Helgoeca nana P009403 | OG0 |
      -Salkve_EP00050_Salpingoeca_kvevrii_P011600 | OG0 |
                  Salurc_EP00051_Salpingoeca_urceolata_P002970 | OG0 |
           •Codhol_EP00042_Codosiga_hollandica_P049392 | OG0 |
        Codhol EP00042 Codosiga hollandica P049394 | OG0 |
           •Mylflu_EP00047_Mylnosiga_fluctuans_P003845 | OG0 |
           •Codhol_EP00042_Codosiga_hollandica_P049393 | OG0 |
          Salmac_EP00052_Salpingoeca_macrocollata_P000789 | OG0 |
          Salpun_EP00053_Salpingoeca_punica_P010284 | OG0 |
         | Salurc_EP00051_Salpingoeca_urceolata_P028252 | OG0
                      Saldol EP00054 Salpingoeca dolichothecata P035694 | OG0 |
             Saldol_EP00054_Salpingoeca_dolichothecata_P020225 | OG0 |
                       Saldol_EP00054_Salpingoeca_dolichothecata_P016813 | OG0 |
                  •Mbre EDQ91528 | OG0 |
                   •Chofle_EP00730_Choanoeca_flexa_P015695 | OG0 |
                  ·Choper_EP00045_Choanoeca_perplexa_P007228 | OG0 |
                   Salinf_EP00049_Salpingoeca_infusionum_P019222 | OG0 |
               •Microa EP00043 Microstomoeca roanoka P005420 | OG0 |
  Opea_EP00118_Oscarella_pearsei_P026443 | OG1 |
   Gracom Gcom scaffold17563 01 | OG1 |
    Stycar_maker-SC_scaffold6639-snap-gene-0.15-mRNA-1 | OG1 |
      Spolac c101804 g1 i2 m.26825c101804-g1 | OG1 |
        Spolac c101804 g1 i3 m.26828c101804-g1 | OG1 |
      65 Spolac c101804 g1 i1 m.26822c101804-g1 | OG1 |
    Xestes maker-XT scaffold1293-augustus-gene-0.29-mRNA-1 | OG1 |
                       -Xestes maker-XT scaffold14834-augustus-gene-0.3-mRNA-1 | OG1 |
                    <sup>100</sup>└─•Xestes_maker-XT_scaffold89534-snap-gene-0.3-mRNA-1 | OG1 |
      •Halamb_c48161_g2_i1mm.2531 | OG1 |
          Aque Aqu2.1.27209 001 | OG1 |
             Aque_Aqu2.1.00071_001 | OG1 |
                Aque_Aqu2.1.27216_001 | OG1 |
             <sup>1001</sup>-Aque_Aqu2.1.27213_001 | OG1 |
           •Rhoesc_Res_017553-T1 | OG1 |
         -Fspp_ffun1.m4.34128.m1 | OG1 |
     <sup>100</sup><sup>1</sup>-Pocdam XM 027184866.1 | OG1 |
            •Gasp_gasp1.m3.9204.m1 | OG1 |
            •Gasp_gasp1.m3.28612.m1 | OG1 |
       <sup>99</sup>└-Fspp_ffun1.m4.16529.m1 | OG1 |
        <sub>5</sub>TrH2_TrispH2_002012-RA | OG1 |
         <sub>-</sub>HoiH23_PIH23_006823-RA | OG1 |
         •Hsap ENST00000254719 | OG1 |
         •Ctel_gnl_WGS_AMQN_CAPTEDRAFT_mRNA172916 | OG1 |
          •Cgig_XM_011439559.3 | OG1 |
          Acagra_model.g14697.t1 | OG1 |
       <sup>100</sup>Acagra model.g14697.t1.1.5d400c49 | OG1 |
                -Tcas TC004405 001 | OG1 |
                   •Tcas_TC011844_001 | OG1 |
             Cscu XM 023362338.1 | OG1 |
          <sup>100</sup> Cscu_XM_023362347.1 | OG1 |
                                           •Dpul mRNA9028 | OG1 |
                •Dpul mRNA22587 | OG1 |
                    •Dpul mRNA21034 | OG1 |
                        Dpul_mRNA5673 | OG1 |
                     <sup>100</sup> Dpul mRNA23288 | OG1 |
                                    •Dpul mRNA5443 | OG1 |
                          •Dpul mRNA6633 | OG1 |
                             •Dpul_mRNA12538 | OG1 |
                            •Dpul_mRNA6605 | OG1 |
                        <sup>100</sup> Dpul_mRNA8761 | OG1 |
```