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SUPPLEMENTARY MATERIAL

corresponding to:

Comprehensive gene expression analyses in pluripotent stem cells of a planarian, *Dugesia japonica*

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TABLE S1

LIST OF THE HICEP CLONES

| Fragment ID | Fragment length (bp) | Clone # | Homology (species) | Published Clone ID in EST (gene name) | E value |
|--------------|----------------------|---------|--|---------------------------------------|----------|
| A3-X-2/HEX | 169.62 | 001 | NB.32.1g [Schmidtea mediterranea] | 05955HH | 4E-16 |
| C3-I-2/NED | 104.64 | 002 | N/A | | |
| D3-I-2/HEX | 169.73 | 003 | NB.32.1g [Schmidtea mediterranea] | =#001 | 4E-16 |
| E11-I-2/FAM | 106.61 | 004 | N/A | 05656HH | |
| G4-I-2/HEX | 226.98 | 005 | N/A | | |
| E5-I-2/HEX | 163.38 | 006 | zinc finger protein Ci-ZF(C2H2)-42 [Ciona intestinalis] | 02488HH | 7E-11 |
| C7-I-2/NED | 262.55 | 007 | SWI/SNF-related chromatin binding protein [Schistosoma mansoni] | 02960HH | 4E-29 |
| E6-I-2/HEX | 107.23 | 008 | Piwi [Botryllus primigenus] | 03609HH (DjpiwiA) | 2E-59 |
| E5-I-2/HEX | 229.27 | 009 | arginine N-methyltransferase 1 [Echinococcus granulosus] | 04361HH | 2E-57 |
| D3-I-2/FAM | 318.17 | 010 | Nucleoside diphosphate kinase [Aspergillus nidulans FGSC A4] | 06317HH | 4E-51 |
| H6-I-2/FAM | 236.91 | 011 | purinergic receptor P2X1 [Taeniopygia guttata] | 06727HH | 3E-21 |
| B3-I-2/FAM | 177.92 | 012 | purinergic receptor P2X4 [Sus scrofa] | 06974HH (DjP2X-A) | 9E-25 |
| H8-I-2/NED | 196.11 | 013 | ribosomal protein L44 [Chlamys farreri] | | 1E-41 |
| F5-I-2/HEX | 178.57 | 014 | N/A | | |
| C2-I-2/FAM | 129.86 | 015 | ribosomal protein S3 [synthetic construct] | 00576HH | 1E-84 |
| A12-X2-1/NED | 170.48 | 016 | N/A | | |
| C2-I-2/FAM | 110.47 | 017 | similar to astacin family metalloendopeptidase FARM-1 [Hydra magnipapillata] | | 6E-33 |
| D10-I-2/HEX | 155.7 | 018 | TNF-receptor-associated factor 1 [Hydra magnipapillata] | 05592HH | 0.000002 |
| D12-I-2/NED | 161.72 | 019 | Zn finger homeodomain 2 [Tribolium castaneum] | | 1E-12 |
| D1-I-2/HEX | 169.6 | 020 | - | - | |
| E5-I-2/FAM | 173.23 | 021 | - | - | |
| F2-I-2/FAM | 186.92 | 022 | - | - | |
| B1-I-2/FAM | 198.82 | 023 | selenophosphate synthetase 1 [Mus musculus] | | 4E-43 |
| B7-I-2/HEX | 160.42 | 024 | Histone RNA hairpin-binding protein [Schistosoma japonicum] | | 2E-29 |
| F2-I-2/FAM | 200.92 | 025 | N/A | | |
| F5-I-2/HEX | 147.86 | 026 | - | - | |
| F6-I-2/FAM | 144.17 | 027 | - | - | |
| F10-I-2/NED | 138.39 | 028 | similar to DEAD (Asp-Glu-Ala-Asp) box polypeptide 53 [Ciona intestinalis] | | 0.000003 |
| F12-I-2/NED | 138.4 | 029 | similar to DEAD (Asp-Glu-Ala-Asp) box polypeptide 53 [Ciona intestinalis] | =#028 | 0.000003 |
| F1-I-2/FAM | 430.13 | 030 | Rootletin (Ciliary rootlet coiled-coil protein) [Schistosoma mansoni] | | 1E-144 |
| F8-I-2/NED | 138.41 | 031 | similar-to-DEAD-(Asp-Glu-Ala-Asp)-box-polypeptide-53-[Ciona-intestinalis] | =#028 | 0.000003 |
| G6-I-2/HEX | 212.56 | 032 | topoisomerase (DNA) II beta [Mus musculus] | | 3E-32 |
| H4-I-2/FAM | 160 | 033 | N/A | | |
| H5-I-2/FAM | 117.56 | 034 | - | - | |
| H6-I-2/FAM | 215.14 | 035 | Sox8b [Takifugu rubripes] | | 1E-20 |
| H7-I-2/FAM | 173.47 | 036 | - | - | |
| D9-I-2/NED | 469.49 | 037 | Placenta-specific gene 8 protein [Schistosoma japonicum] | | 1E-13 |
| E9-I-2/FAM | 244.37 | 038 | SMED P53 [Schmidtea mediterranea] | | |
| H8-I-2/FAM | 338.13 | 039 | - | - | |
| A11-X2-2/FAM | 105.56 | 040 | Setb protein [Danio rerio] | 02457HH | 8E-49 |
| A4-X2-1/HEX | 276.93 | 041 | similar to DEAD (Asp-Glu-Ala-Asp) box polypeptide 53 [Ciona intestinalis] | =#028 | 0.000003 |
| B5-I-2/NED | 123.59 | 042 | Putative OPA3-like protein CG13603 [Schistosoma japonicum] | | 4E-32 |
| C11-I-2/NED | 101.22 | 043 | N/A | | |
| C7-I-2/NED | 100.72 | 044 | N/A | =#043 | |
| C9-I-2/NED | 130.53 | 045 | S3 ribosomal protein | | 8E-81 |

TABLE S1 (CONTINUED)

LIST OF THE HICEP CLONES

| | | | | | |
|-------------|--------|-------|--|---------|----------|
| D3-I-2/FAM | 179.4 | 046 | Dynein intermediate chain 2 [Anthocidaris crassispina] | 03394HH | 5E-57 |
| D9-I-2/FAM | 101.36 | 047 | hypothetical protein Bm1_17870 [Brugia malayi] | 01435HH | 4E-11 |
| | | 047-2 | chaperonin containing t-complex protein 1 gamma subunit tcpg [Schistosoma mansoni] | 03940HH | 0.0 |
| E11-I-2/FAM | 291.54 | 048 | similar to cathepsin L [Strongylocentrotus purpuratus] | 01941HH | 7E-57 |
| E3-I-2/NED | 144.05 | 049 | - | - | |
| E5-I-2/HEX | 99.47 | 050 | large subunit ribosomal protein 10 [Oigolaimella attenuata] | 04458HH | 8E-59 |
| E6-I-2/FAM | 147.06 | 051 | N/A | | |
| E7-I-2/FAM | 194.86 | 052 | N/A | | |
| F10-I-2/FAM | 104.03 | 053 | guanine nucleotide-binding protein beta polypeptide 2-like 1 [Paramisgurnus dabryanus] | 02927HH | 2E-74 |
| F10-I-2/NED | 76.56 | 054 | N/A | | |
| F3-I-2/NED | 60.86 | 055 | - | - | |
| F5-I-2/FAM | 178.04 | 056 | peptidyl-prolyl cis-trans isomerase [Aspergillus clavatus NRRL 1] | 01676HH | 3E-56 |
| H3-I-2/NED | 60.99 | 057 | N/A | | |
| H6-I-2/FAM | 62.08 | 058 | N/A | 06441HH | |
| H7-I-2/HEX | 77.85 | 059 | - | - | |
| A6-I-2/NED | 89.7 | 060 | N/A | | |
| C3-I-2/FAM | 84.12 | 061 | - | - | |
| | | 061-2 | NADH dehydrogenase subunit 2 [Metaseiulus occidentalis] | 07117HH | 0.005 |
| C7-I-2/NED | 55.94 | 062 | peroxiredoxins, prx-1, prx-2, prx-3 [Aedes aegypti] | | 1E-81 |
| D1-I-2/FAM | 81.31 | 063 | N/A | | |
| | | 063-2 | N/A | | |
| D1-I-2/FAM | 83.06 | 064 | eukaryotic translation elongation factor 1 gamma [Schistosoma japonicum] | 03532HH | 5E-65 |
| D2-I-2/HEX | 70.6 | 065 | zinc-finger-protein-[Schistosoma-mansoni] | | 1E-170 |
| D6-I-2/HEX | 79.24 | 066 | N/A | | |
| E10-I-2/FAM | 60.51 | 067 | High-mobility-group-protein-DSP1-[Schistosoma-japonicum] | 00126HN | 4E-63 |
| E5-I-2/HEX | 75.57 | 068 | proteasome-catalytic-subunit-1-(T01-family)-[Schistosoma-mansoni] | | 1E-60 |
| F12-I-2/NED | 88.19 | 069 | conserved Plasmodium protein [Plasmodium falciparum 3D7] | 04499HH | 0.013 |
| F4-I-2/HEX | 67 | 070 | - | - | |
| G12-I-2/NED | 67.43 | 071 | N/A | | |
| | | 071-2 | protein kinase [Schistosoma mansoni] | 01400HH | 5E-38 |
| G3-I-2/NED | 139.68 | 072 | N/A | | |
| G3-I-2/NED | 56.98 | 073 | N/A | 03873HH | |
| H4-I-2/HEX | 104.98 | 074 | - | - | |
| E10-I-2/FAM | 67.99 | 075 | N/A | 00310HH | |
| F10-I-2/NED | 95.29 | 076 | heat shock cognate protein 70 [Trichoplax adhaerens] | 00095HH | 8E-52 |
| F2-I-2/HEX | 135.16 | 077 | - | - | |
| F3-I-2/NED | 122.71 | 078 | - | - | |
| F6-I-2/FAM | 114.06 | 079 | cytochrome c oxidase subunit II [Amolops tormotus] | 03988HH | 6E-11 |
| F9-I-2/HEX | 103.97 | 080 | N/A | 01371HH | |
| G11-I-2/FAM | 106.67 | 081 | N/A | =#004 | |
| G2-I-2/FAM | 64.87 | 082 | protein phosphatase 2C [Schistosoma mansoni] | 00503HH | 3E-62 |
| G4-I-2/HEX | 221.55 | 083 | - | - | |
| | | 083-2 | putative NCK-associated protein 1 isoform 2 [Schistosoma japonicum] | | 7E-47 |
| | | 083-3 | N/A | | |
| G4-I-2/HEX | 120.96 | 084 | tubulin, beta, 2 [Homo sapiens] | 00084HH | 0.0 |
| G6-I-2/FAM | 99.35 | 085 | conserved-hypothetical-protein-[Ixodes-scapularis] | | 0.000006 |
| G6-I-2/FAM | 107.78 | 086 | - | - | |
| G7-I-2/FAM | 112.71 | 087 | - | - | |

TABLE S1 (CONTINUED)

LIST OF THE HICEP CLONES

| | | | | | |
|-------------|--------|-------|--|---------|----------|
| D3-I-2/FAM | 179.4 | 046 | Dynein intermediate chain 2 [Anthocidaris crassispina] | 03394HH | 5E-57 |
| D9-I-2/FAM | 101.36 | 047 | hypothetical protein Bm1_17870 [Brugia malayi] | 01435HH | 4E-11 |
| | | 047-2 | chaperonin containing t-complex protein 1 gamma subunit tcpg [Schistosoma mansoni] | 03940HH | 0.0 |
| E11-I-2/FAM | 291.54 | 048 | similar to cathepsin L [Strongylocentrotus purpuratus] | 01941HH | 7E-57 |
| E3-I-2/NED | 144.05 | 049 | - | - | |
| E5-I-2/HEX | 99.47 | 050 | large subunit ribosomal protein 10 [Oigolaimella attenuata] | 04458HH | 8E-59 |
| E6-I-2/FAM | 147.06 | 051 | N/A | | |
| E7-I-2/FAM | 194.86 | 052 | N/A | | |
| F10-I-2/FAM | 104.03 | 053 | guanine nucleotide-binding protein beta polypeptide 2-like 1 [Paramisgurnus dabryanus] | 02927HH | 2E-74 |
| F10-I-2/NED | 76.56 | 054 | N/A | | |
| F3-I-2/NED | 60.86 | 055 | - | - | |
| F5-I-2/FAM | 178.04 | 056 | peptidyl-prolyl cis-trans isomerase [Aspergillus clavatus NRRL 1] | 01676HH | 3E-56 |
| H3-I-2/NED | 60.99 | 057 | N/A | | |
| H6-I-2/FAM | 62.08 | 058 | N/A | 06441HH | |
| H7-I-2/HEX | 77.85 | 059 | - | - | |
| A6-I-2/NED | 89.7 | 060 | N/A | | |
| C3-I-2/FAM | 84.12 | 061 | - | - | |
| | | 061-2 | NADH dehydrogenase subunit 2 [Metaseiulus occidentalis] | 07117HH | 0.005 |
| C7-I-2/NED | 55.94 | 062 | peroxiredoxins, prx-1, prx-2, prx-3 [Aedes aegypti] | | 1E-81 |
| D1-I-2/FAM | 81.31 | 063 | N/A | | |
| | | 063-2 | N/A | | |
| D1-I-2/FAM | 83.06 | 064 | eukaryotic translation elongation factor 1 gamma [Schistosoma japonicum] | 03532HH | 5E-65 |
| D2-I-2/HEX | 70.6 | 065 | zinc-finger-protein-[Schistosoma-mansoni] | | 1E-170 |
| D6-I-2/HEX | 79.24 | 066 | N/A | | |
| E10-I-2/FAM | 60.51 | 067 | High-mobility-group-protein-DSP1-[Schistosoma-japonicum] | 00126HN | 4E-63 |
| E5-I-2/HEX | 75.57 | 068 | proteasome-catalytic-subunit-1-(T01-family)-[Schistosoma-mansoni] | | 1E-60 |
| F12-I-2/NED | 88.19 | 069 | conserved Plasmodium protein [Plasmodium falciparum 3D7] | 04499HH | 0.013 |
| F4-I-2/HEX | 67 | 070 | - | - | |
| G12-I-2/NED | 67.43 | 071 | N/A | | |
| | | 071-2 | protein kinase [Schistosoma mansoni] | 01400HH | 5E-38 |
| G3-I-2/NED | 139.68 | 072 | N/A | | |
| G3-I-2/NED | 56.98 | 073 | N/A | 03873HH | |
| H4-I-2/HEX | 104.98 | 074 | - | - | |
| E10-I-2/FAM | 67.99 | 075 | N/A | 00310HH | |
| F10-I-2/NED | 95.29 | 076 | heat shock cognate protein 70 [Trichoplax adhaerens] | 00095HH | 8E-52 |
| F2-I-2/HEX | 135.16 | 077 | - | - | |
| F3-I-2/NED | 122.71 | 078 | - | - | |
| F6-I-2/FAM | 114.06 | 079 | cytochrome c oxidase subunit II [Amolops tormotus] | 03988HH | 6E-11 |
| F9-I-2/HEX | 103.97 | 080 | N/A | 01371HH | |
| G11-I-2/FAM | 106.67 | 081 | N/A | =#004 | |
| G2-I-2/FAM | 64.87 | 082 | protein phosphatase 2C [Schistosoma mansoni] | 00503HH | 3E-62 |
| G4-I-2/HEX | 221.55 | 083 | - | - | |
| | | 083-2 | putative NCK-associated protein 1 isoform 2 [Schistosoma japonicum] | | 7E-47 |
| | | 083-3 | N/A | | |
| G4-I-2/HEX | 120.96 | 084 | tubulin, beta, 2 [Homo sapiens] | 00084HH | 0.0 |
| G6-I-2/FAM | 99.35 | 085 | conserved-hypothetical-protein-[Ixodes-scapularis] | | 0.000006 |
| G6-I-2/FAM | 107.78 | 086 | - | - | |
| G7-I-2/FAM | 112.71 | 087 | - | - | |

TABLE S1 (CONTINUED)

LIST OF THE HiCEP CLONES

| | | | | | |
|-------------|--------|-------|--|---------|------------|
| H3-I-2/FAM | 81.41 | 088 | - | - | |
| H3-I-2/FAM | 114.28 | 089 | - | - | |
| H5-I-2/HEX | 96.65 | 090 | - | - | |
| B1-I-2/FAM | 65.36 | 091 | ATP synthase f chain mitochondrial-related [Schistosoma mansoni] | | 7E-14 |
| F10-I-2/NED | 83.61 | 092 | - | - | |
| F6-I-2/FAM | 94.03 | 093 | heat shock cognate protein 70 [Trichoplax adhaerens] | =#076 | 8E-52 |
| G3-I-2/FAM | 53.76 | 094 | sorting nexin 2 [Homo sapiens] | | 6E-49 |
| G4-I-2/HEX | 100.31 | 095 | N/A | | |
| G8-I-2/FAM | 80.88 | 096 | glycine amidinotransferase(human) | 02454HH | 4E-48 |
| H1-I-2/FAM | 71.52 | 097 | similar-to-cytochrome-P450-CYP15A1-[Acyrtosiphon-pisum] | | 0.00000004 |
| H5-I-2/FAM | 54.49 | 098 | CDGSH-type Zn finger-containing protein-like protein [Schistosoma mansoni] | | 1E-31 |
| H6-I-2/HEX | 96.11 | 099 | N/A | | |
| G12-I-2/FAM | 91.73 | 100 | FK506-binding protein [Manduca sexta] | | 2E-42 |
| G1-I-1/FAM | 67.18 | 101 | - | - | |
| | | 101-2 | N/A | | |
| | | 101-3 | N/A | | |
| G4-I-2/NED | 100.53 | 102 | N/A | | |

(-) means Not Analyzed.