

**Additional file 18: Number of IHRs containing CpG islands.**

| Pair wise genomic location | IHR1  |                  |          | IHR2  |                  |          |
|----------------------------|-------|------------------|----------|-------|------------------|----------|
|                            | total | with CpG islands | p* value | total | with CpG islands | p* value |
| Exonic-Exonic              | 29    | 4                | 0.8260   | 16    | 4                | 0.9388   |
| Intronic-Intronic          | 62    | 1                | 0.0024   | 57    | 0                | 2.9E-05  |
| Intergenic-Intergenic      | 77    | 11               | 0.9432   | 111   | 17               | 0.7187   |
| Exonic-Intronic            | 16    | 2                | 0.7667   | 12    | 1                | 0.4608   |
| Exonic-Intergenic          | 4     | 2                | 0.9961   | 4     | 2                | 0.99     |
| Intronic-Intergenic        | 0     | 0                | 1        | 15    | 7                | 0.9997   |
| total                      | 188   | 20               |          | 215   | 31               |          |

\* Hypergeometric test was used to test the enrichment.