

**Table S5:** List of retroviral sequences annotated in the human genome (Ensembl).

| ENSEMBL "ERV"   |                   |  |  |        |                      |
|---|-------------------|--|--|--------|----------------------|
| annotation  | name              | family   | chromosome                                   | aa     | other name           |
| <b>Envelope coding gene, full length (this study)</b> |                   |  |  |        |                      |
| ENSG00000226887                                       | <b>ERVMER34-1</b> | endogenous retrovirus group MER34 member 1, envelope | <u>Chromosome 4: 52,722,618-52,751,586</u>   | 563 aa | HEMO                 |
| ENSG00000242950                                       | <b>ERVW-1</b>     | endogenous retrovirus group W member 1, envelope     | <u>Chromosome 7: 92,468,380-92,477,986</u>   | 538 aa | SYNCYTIN-1           |
| ENSG00000244476                                       | <b>ERVFRD-1</b>   | endogenous retrovirus group FRD member 1, envelope   | <u>Chromosome 6: 11,102,489-11,111,725</u>   | 538 aa | SYNCYTIN-2           |
| ENSG00000268964                                       | <b>ERVV-2</b>     | endogenous retrovirus group V member 2, envelope     | <u>Chromosome 19: 53,044,740-53,051,680</u>  | 535 aa | ENV-V2               |
| ENSG00000213462                                       | <b>ERV3-1</b>     | endogenous retrovirus group 3 member 1, envelope     | <u>Chromosome 7: 64,990,356-65,006,743</u>   | 604 aa | ENV-R                |
| <b>Others (truncated, Inc, unspecific)</b>            |                   |  |  |        |                      |
| ENSG00000269526                                       | <b>ERVV-1</b>     | endogenous retrovirus group V member 1, envelope     | <u>Chromosome 19: 53,013,921-53,016,122</u>  | 477 aa | ENV-V1               |
| ENSG00000267259                                       | <b>ERVE-1</b>     | endogenous retrovirus group E member 1               | <u>Chromosome 17: 28,232,590-28,235,281</u>  |        | lncRNA               |
| ENSG00000251292                                       | <b>ERVH-1</b>     | endogenous retrovirus group H member 1               | <u>Chromosome 4: 23,723,262-23,733,579</u>   |        | lncRNA               |
| ENSG00000233056                                       | <b>ERVH48-1</b>   | endogenous retrovirus group 48 member 1              | <u>Chromosome 21: 42,916,803-42,925,646</u>  | 160 aa | SUPPRESSYN           |
| ENSG00000264801                                       | <b>ERVFRD-3</b>   | endogenous retrovirus group FRD member 3             | <u>Chromosome 9: 21,929,457-21,931,073</u>   |        | No protein           |
| ENSG00000267696                                       | <b>ERVK-28</b>    | endogenous retrovirus group K member 28              | <u>Chromosome 19: 27,638,483-27,646,483</u>  |        | lncRNA HERV-K(HML2)  |
| ENSG00000260565                                       | <b>ERVK13-1</b>   | endogenous retrovirus group K13 member 1             | <u>Chromosome 16: 2,660,348-2,682,379</u>    |        | lncRNA HERV-K(HML2)  |
| ENSG00000142396                                       | <b>ERVK3-1</b>    | endogenous retrovirus group K3 member 1              | <u>Chromosome 19: 58,305,319-58,315,663</u>  | 109 aa | HERV-K(HML6-1)       |
| ENSG00000269486                                       | <b>ERVK9-11</b>   | endogenous retrovirus group K9 member 11             | <u>Chromosome 19: 38,935,297-38,938,632</u>  |        | lncRNA HERV-K(HML-3) |
| ENSG00000230426                                       | <b>ERVMER61-1</b> | long intergenic non-protein coding RNA 1036          | <u>Chromosome 1: 187,070,700-187,686,628</u> |        | lncRNA               |

Upper part: the five envelope retroviral sequences used in this study.

Bottom part: truncated or non-coding HERV sequences.