**Supplemental material**

**Table 3.** Pentapeptides unique to HCV1a proteome: occurrences and location of the corresponding oligodeoxynucleotide sequences in the human genome.

| Pos[1] | AA Sequence[2] | 5'-Oligodeoxynucleotide[3] | Oligodeoxynucleotide match location in the human genome: | | |
|---|---|---|---|---|---|
| | | | Identities[4] | Minus strand[5] | Plus strand[5, 6] |
| 73 | RTWAQ | AGGACCTGGGCTCAG | 15/15 | 28 | 17 |
| 74 | TWAQP | ACCTGGGCTCAGCCC | 15/15 | 9 | 4 |
| 79 | GYPWP | GGGTACCCTTGGCCC | 15/15 | 5 | 5 |
| 92 | WAGWL | TGGGCGGGATGGCTC | 15/15 | 20 | 25 |
| 131 | DLMGY | GACCTCATGGGGTAC | 15/15 | 4 | 1 |
| 200 | YHVTN | TACCACGTCACCAAT | 14/15 | 6 | 7 |
| 202 | VTNDC | GTCACCAATGATTGC | 14/15 | 20 | 21 |
| 229 | VREGN | GTTCGTGAGGGCAAC | 15/15 | 1 | 3 |
| 237 | CWVAM | TGTTGGGTGGCGATG | 14/15 | 1 | 9 |
| 258 | RRHID | CGACGTCACATCGAT | 13/15 | 4 | 0 |
| 295 | RRHWT | AGGCGCCACTGGACG | 15/15 | 0 | 2 |
| 297 | HWTTQ | CACTGGACGACGCAA | 13/15 | 1 | 7 |
| 298 | WTTQG | TGGACGACGCAAGGT | 14/15 | 1 | 1 |
| 315 | HRMAW | CACCGCATGGCATGG | 15/15 | 2 | 0 |
| 316 | RMAWD | CGCATGGCATGGGAT | 15/15 | 1 | 1 |
| 318 | AWDMM | GCATGGGATATGATG | 15/15 | 5 | 3 |
| 319 | WDMMM | TGGGATATGATGATG | 15/15 | 16 | 11 |
| 320 | DMMMN | GATATGATGATGAAC | 15/15 | 6 | 6 |
| 321 | MMMNW | ATGATGATGAACTGG | 15/15 | 19 | 21 |
| 322 | MMNWS | ATGATGAACTGGTCC | 15/15 | 9 | 6 |
| 323 | MNWSP | ATGAACTGGTCCCCT | 15/15 | 2 | 2 |
| 363 | MVGNW | ATGGTGGGGAACTGG | 15/15 | 21 | 27 |
| 364 | VGNWA | GTGGGGAACTGGGCG | 15/15 | 1 | 1 |
| 425 | ALNCN | GCCCTGAACTGCAAT | 15/15 | 12 | 5 |
| 427 | NCNDS | AACTGCAATGATAGC | 15/15 | 8 | 11 |
| 432 | LNTGW | CTCAACACCGGCTGG | 14/15 | 9 | 3 |
| 440 | LFYHH | CTTTTCTATCACCAC | 15/15 | 6 | 4 |
| 441 | FYHHK | TTCTATCACCACAAG | 15/15 | 7 | 8 |
| 443 | HHKFN | CACCACAAGTTCAAC | 15/15 | 4 | 4 |
| 464 | FDQGW | TTTGACCAGGGCTGG | 15/15 | 8 | 2 |
| 482 | RPYCW | CGCCCCTACTGCTGG | 15/15 | 2 | 1 |
| 483 | PYCWH | CCCTACTGCTGGCAC | 15/15 | 5 | 5 |
| 484 | YCWHY | TACTGCTGGCACTAC | 15/15 | 0 | 2 |
| 485 | CWHYP | TGCTGGCACTACCCC | 15/15 | 2 | 4 |
| 486 | WHYPP | TGGCACTACCCCCCA | 15/15 | 8 | 5 |
| 488 | YPPKP | TACCCCCCAAAACCT | 15/15 | 5 | 5 |
| 492 | PCGIV | CCTTGCGGTATTGTG | 15/15 | 0 | 2 |
| 504 | PVYCF | CCGGTATATTGCTTC | 15/15 | 1 | 1 |
| 505 | VYCFT | GTATATTGCTTCACT | 15/15 | 6 | 3 |
| 506 | YCFTP | TATTGCTTCACTCCC | 15/15 | 4 | 6 |
| 524 | PTYSW | CCCACCTACAGCTGG | 15/15 | 6 | 4 |
| 525 | TYSWG | ACCTACAGCTGGGGT | 15/15 | 5 | 7 |
| 547 | NWFGC | AATTGGTTCGGTTGT | 14/15 | 1 | 1 |
| 548 | WFGCT | TGGTTCGGTTGTACC | 14/15 | 4 | 0 |
| 549 | FGCTW | TTCGGTTGTACCTGG | 14/15 | 2 | 4 |
| 551 | CTWMN | TGTACCTGGATGAAC | 15/15 | 3 | 3 |
| 552 | TWMNS | ACCTGGATGAACTCA | 15/15 | 6 | 15 |
| 573 | AGNNT | GCGGGCAACAACACC | 14/15 | 4 | 2 |
| 579 | HCPTD | CACTGCCCCACTGAT | 15/15 | 18 | 7 |
| 581 | PTDCF | CCCACTGATTGCTTC | 15/15 | 5 | 5 |
| 601 | WITPR | TGGATCACACCCAGG | 15/15 | 10 | 6 |
| 606 | CLVDY | TGCCTGGTCGACTAC | 14/15 | 1 | 3 |
| 609 | DYPYR | GACTACCCGTATAGG | 14/15 | 5 | 2 |
| 610 | YPYRL | TACCCGTATAGGCTT | 15/15 | 2 | 1 |
| 611 | PYRLW | CCGTATAGGCTTTGG | 15/15 | 1 | 0 |
| 612 | YRLWH | TATAGGCTTTGGCAT | 15/15 | 8 | 8 |
| 613 | RLWHY | AGGCTTTGGCATTAT | 15/15 | 6 | 6 |
| 614 | LWHYP | CTTTGGCATTATCCT | 15/15 | 4 | 4 |
| 615 | WHYPC | TGGCATTATCCTTGT | 15/15 | 10 | 7 |
| 618 | PCTIN | CCTTGTACCATCAAC | 15/15 | 2 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 627 | KIRMY | AAAATCAGGATGTAC | 15/15 | 7 | 6 |
| 628 | IRMYV | ATCAGGATGTACGTG | 14/15 | 7 | 6 |
| 630 | MYVGG | ATGTACGTGGGAGGG | 15/15 | 1 | 3 |
| 641 | AACNW | GCTGCCTGCAACTGG | 15/15 | 15 | 11 |
| 642 | ACNWT | GCCTGCAACTGGACG | 15/15 | 4 | 0 |
| 643 | CNWTR | TGCAACTGGACGCGG | 14/15 | 1 | 0 |
| 644 | NWTRG | AACTGGACGCGGGGC | 14/15 | 6 | 2 |
| 645 | WTRGE | TGGACGCGGGGCGAA | 13/15 | 19 | 33 |
| 668 | TTQWQ | ACTACACAGTGGCAG | 15/15 | 12 | 8 |
| 670 | QWQVL | CAGTGGCAGGTCCTC | 15/15 | 17 | 13 |
| 711 | WAIKW | TGGGCCATTAAGTGG | 15/15 | 4 | 5 |
| 713 | IKWEY | ATTAAGTGGGAGTAC | 15/15 | 5 | 3 |
| 727 | DARVC | GACGCGCGCGTCTGC | 14/15 | 0 | 2 |
| 732 | SCLWM | TCCTGCTTGTGGATG | 15/15 | 6 | 11 |
| 733 | CLWMM | TGCTTGTGGATGATG | 15/15 | 8 | 6 |
| 770 | FFCFA | TTCTTCTGCTTTGCA | 15/15 | 25 | 35 |
| 772 | CFAWY | TGCTTTGCATGGTAT | 15/15 | 11 | 15 |
| 786 | VYTFY | GTCTACACCTTCTAC | 15/15 | 4 | 2 |
| 787 | YTFYG | TACACCTTCTACGGG | 15/15 | 1 | 1 |
| 789 | FYGMW | TTCTACGGGATGTGG | 14/15 | 2 | 6 |
| 790 | YGMWP | TACGGGATGTGGCCT | 14/15 | 5 | 1 |
| 791 | GMWPL | TACGGGATGTGGCCT | 15/15 | 7 | 9 |
| 803 | PQRAY | CCCCAGCGGGCGTAC | 13/15 | 23 | 21 |
| 837 | YISWC | TATATCAGCTGGTGC | 15/15 | 5 | 5 |
| 840 | WCLWW | TGGTGCTTGTGGTGG | 15/15 | 24 | 17 |
| 843 | WWLQY | TGGTGGCTTCAGTAT | 15/15 | 8 | 4 |
| 855 | QLHVW | CAACTGCACGTGTGG | 14/15 | 16 | 17 |
| 856 | LHVWI | CTGCACGTGTGGATT | 15/15 | 1 | 1 |
| 857 | HVWIP | CACGTGTGGATTCCC | 15/15 | 1 | 1 |
| 858 | VWIPP | GTGTGGATTCCCCCC | 15/15 | 2 | 3 |
| 876 | MCAVH | ATGTGTGCTGTACAC | 15/15 | 5 | 4 |
| 877 | CAVHP | TGTGCTGTACACCCG | 15/15 | 1 | 1 |
| 899 | WILQA | TGGATTCTTCAAGCC | 15/15 | 5 | 5 |
| 931 | HYVQM | CATTACGTGCAAATG | 14/15 | 2 | 6 |
| 946 | TYVYN | ACCTATGTTTATAAC | 15/15 | 9 | 9 |
| 956 | RDWAH | CGGGACTGGGCGCAC | 14/15 | 14 | 10 |
| 982 | LITWG | CTCATCACGTGGGGG | 14/15 | 15 | 19 |
| 983 | ITWGA | ATCACGTGGGGGGCA | 15/15 | 2 | 2 |
| 985 | WGADT | TGGGGGGCAGATACC | 15/15 | 3 | 3 |
| 1013 | PADGM | CCAGCCGATGGAATG | 14/15 | 2 | 2 |
| 1074 | NGVCW | AATGGGGTGTGCTGG | 15/15 | 3 | 13 |
| 1075 | GVCWT | GGGGTGTGCTGGACT | 15/15 | 2 | 2 |
| 1077 | CWTVY | TGCTGGACTGTCTAC | 15/15 | 1 | 7 |
| 1079 | TVYHG | ACTGTCTACCACGGG | 15/15 | 1 | 0 |
| 1098 | QMYTN | CAGATGTATACCAAT | 15/15 | 4 | 2 |
| 1106 | DLVGW | GACCTTGTGGGCTGG | 15/15 | 12 | 22 |
| 1130 | YLVTR | TACCTGGTCACGAGG | 14/15 | 4 | 4 |
| 1184 | CTRGV | GTGCACCGTGGAGTG | 15/15 | 2 | 2 |
| 1201 | ETTMR | GAGACAACCATGAGG | 15/15 | 7 | 7 |
| 1266 | YMSKA | TACATGTCCAAGGCT | 15/15 | 3 | 3 |
| 1270 | AHGID | GCTCATGGGATCGAT | 14/15 | 1 | 4 |
| 1291 | TYSTY | ACGTACTCCACCTAC | 15/15 | 3 | 3 |
| 1316 | ECHST | GAGTGCCACTCCACG | 14/15 | 12 | 16 |
| 1387 | GRHLI | GGGAGACATCTCATC | 15/15 | 3 | 1 |
| 1391 | IFCHS | ATCTTCTGTCATTCA | 15/15 | 8 | 4 |
| 1436 | TDALM | ACCGATGCCCTCATG | 15/15 | 1 | 1 |
| 1448 | DSVID | GACTCGGTGATAGAC | 15/15 | 0 | 2 |
| 1449 | SVIDC | TCGGTGATAGACTGC | 15/15 | 1 | 5 |
| 1451 | IDCNT | ATAGACTGCAATACG | 15/15 | 3 | 6 |
| 1455 | TCVTQ | ACGTGTGTCACCCAG | 15/15 | 2 | 2 |
| 1520 | YDAGC | TATGACGCAGGCTGT | 14/15 | 6 | 4 |
| 1522 | AGCAW | GCAGGCTGTGCTTGG | 15/15 | 17 | 12 |
| 1523 | GCAWY | GGCTGTGCTTGGTAT | 15/15 | 3 | 1 |
| 1524 | CAWYE | TGTGCTTGGTATGAG | 15/15 | 2 | 8 |
| 1549 | VCQDH | GTGTGCCAGGACCAT | 15/15 | 7 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 1553 | HLEFW | CATCTTGAATTTTGG | 15/15 | 5 | 6 |
| 1556 | FWEGV | TTTTGGGAGGGCGTC | 15/15 | 1 | 3 |
| 1566 | HIDAH | CATATAGATGCCCAC | 15/15 | 2 | 2 |
| 1567 | IDAHF | ATAGATGCCCACTTT | 15/15 | 6 | 4 |
| 1603 | WDQMW | TGGGACCAGATGTGG | 15/15 | 19 | 17 |
| 1604 | DQMWK | GACCAGATGTGGAAG | 15/15 | 6 | 8 |
| 1605 | QMWKC | CAGATGTGGAAGTGT | 15/15 | 3 | 8 |
| 1607 | WKCLI | TGGAAGTGTTTGATT | 15/15 | 6 | 8 |
| 1641 | TKYIM | ACCAAATACATCATG | 15/15 | 2 | 9 |
| 1643 | YIMTC | TACATCATGACATGC | 15/15 | 3 | 2 |
| 1644 | IMTCM | ATCATGACATGCATG | 15/15 | 3 | 3 |
| 1645 | MTCMS | ATGACATGCATGTCG | 15/15 | 2 | 0 |
| 1670 | AAYCL | GCCGCGTATTGCCTG | 13/15 | 1 | 4 |
| 1718 | EQGMM | GAGCAAGGGATGATG | 15/15 | 8 | 7 |
| 1719 | QGMML | CAAGGGATGATGCTC | 15/15 | 2 | 2 |
| 1749 | VQTNW | GTCCAGACCAACTGG | 15/15 | 1 | 5 |
| 1750 | QTNWQ | CAGACCAACTGGCAA | 15/15 | 19 | 9 |
| 1760 | WAKHM | TGGGCGAAGCATATG | 15/15 | 11 | 21 |
| 1761 | AKHMW | GCGAAGCATATGTGG | 15/15 | 3 | 3 |
| 1762 | KHMWN | AAGCATATGTGGAAC | 15/15 | 2 | 6 |
| 1763 | HMWNF | CATATGTGGAACTTC | 15/15 | 5 | 6 |
| 1764 | MWNFI | ATGTGGAACTTCATC | 15/15 | 6 | 5 |
| 1814 | WVAAQ | TGGGTGGCTGCCCAG | 15/15 | 17 | 19 |
| 1911 | AVQWM | GCAGTGCAGTGGATG | 15/15 | 4 | 6 |
| 1914 | WMNRL | TGGATGAACCGGCTG | 15/15 | 1 | 1 |
| 1958 | RLHQW | CGACTGCACCAGTGG | 15/15 | 2 | 3 |
| 1960 | HQWIS | CACCAGTGGATAAGC | 15/15 | 8 | 2 |
| 1978 | DIWDW | GACATCTGGGACTGG | 15/15 | 16 | 13 |
| 1979 | IWDWI | ATCTGGGACTGGATA | 15/15 | 14 | 16 |
| 1980 | WDWIC | TGGGACTGGATATGC | 15/15 | 1 | 3 |
| 1982 | WICEV | TGGATATGCGAGGTG | 13/15 | 14 | 13 |
| 2017 | VWRVD | GTCTGGCGAGTGGAC | 14/15 | 4 | 2 |
| 2022 | GIMHT | GGCATCATGCACACT | 15/15 | 0 | 4 |
| 2024 | MHTRC | ATGCACACTCGCTGC | 15/15 | 3 | 1 |
| 2025 | HTRCH | CACACTCGCTGCCAC | 15/15 | 0 | 2 |
| 2026 | TRCHC | ACTCGCTGCCACTGT | 15/15 | 4 | 3 |
| 2029 | HCGAE | CACTGTGGAGCTGAG | 15/15 | 20 | 26 |
| 2043 | MRIVG | ATGAGGATCGTCGGT | 12/15 | 44 | 45 |
| 2050 | TCRNM | ACCTGCAGGAACATG | 15/15 | 4 | 7 |
| 2051 | CRNMW | TGCAGGAACATGTGG | 15/15 | 2 | 8 |
| 2052 | RNMWS | AGGAACATGTGGAGT | 15/15 | 8 | 15 |
| 2053 | NMWSG | AACATGTGGAGTGGG | 15/15 | 6 | 8 |
| 2058 | TFPIN | ACCTTCCCCATTAAT | 14/15 | 51 | 59 |
| 2059 | FPINA | TTCCCCATTAATGCC | 15/15 | 4 | 6 |
| 2074 | APNYT | GCGCCGAACTACACG | 14/15 | 2 | 2 |
| 2075 | PNYTF | CCGAACTACACGTTC | 14/15 | 1 | 5 |
| 2079 | FALWR | TTCGCGCTATGGAGG | 15/15 | 2 | 2 |
| 2099 | HYVTG | CACTACGTGACGGGT | 14/15 | 2 | 3 |
| 2110 | KCPCQ | AAATGCCCGTGCCAG | 15/15 | 2 | 4 |
| 2113 | CQVPS | TGCCAGGTCCCATCG | 15/15 | 2 | 2 |
| 2151 | HEYPV | CACGAATACCCGGTA | 13/15 | 1 | 3 |
| 2236 | MGGNI | ATGGGCGGCAACATC | 14/15 | 2 | 0 |
| 2286 | VWARP | GTTTGGGCGCGGCCG | 14/15 | 2 | 3 |
| 2287 | WARPD | TGGGCGCGGCCGGAC | 15/15 | 2 | 2 |
| 2310 | VVHGC | GTGGTCCATGGCTGT | 14/15 | 8 | 6 |
| 2415 | DVVCC | GATGTCGTGTGCTGC | 14/15 | 6 | 4 |
| 2418 | CCSMS | GTCGTGTGCTGCTCA | 15/15 | 3 | 3 |
| 2423 | YSWTG | TACTCTTGGACAGGC | 15/15 | 3 | 3 |
| 2431 | TPCAA | ACCCCGTGCGCCGCG | 14/15 | 1 | 4 |
| 2451 | RHHNL | CGTCACCACAATTTG | 15/15 | 3 | 2 |
| 2452 | HHNLV | CACCACAATTTGGTG | 15/15 | 6 | 5 |
| 2463 | SACQR | AGTGCTTGCCAAAGG | 15/15 | 7 | 3 |
| 2465 | CQRQK | TGCCAAAGGCAGAAG | 15/15 | 7 | 3 |
| 2538 | INSVW | ATCAACTCCGTGTGG | 14/15 | 7 | 8 |
| 2557 | IMAKN | ATCATGGCTAAGAAC | 15/15 | 6 | 21 |

| | | | | | |
|---|---|---|---|---|---|
| 2562 | EVFCV | GAGGTTTTCTGCGTT | 15/15 | 4 | 6 |
| 2634 | MGFSY | ATGGGAAGCTCCTAC | 15/15 | 3 | 4 |
| 2638 | YDTRC | TATGATACCCGCTGC | 15/15 | 0 | 4 |
| 2639 | DTRCF | GATACCCGCTGCTTT | 15/15 | 3 | 1 |
| 2641 | RCFDS | CGCTGCTTTGACTCC | 14/15 | 36 | 39 |
| 2659 | YQCCD | TACCAATGTTGTGAC | 15/15 | 2 | 4 |
| 2695 | YRRCR | TATCGCAGGTGCCGC | 14/15 | 2 | 1 |
| 2713 | TCYIK | ACTTGCTACATCAAG | 15/15 | 4 | 6 |
| 2728 | QDCTM | CAGGACTGCACCATG | 15/15 | 7 | 4 |
| 2731 | TMLVC | ACCATGCTCGTGTGT | 15/15 | 1 | 1 |
| 2761 | AMTRY | GCTATGACCAGGTAC | 15/15 | 2 | 4 |
| 2762 | MTRYS | ATGACCAGGTACTCC | 15/15 | 7 | 3 |
| 2785 | CSSNV | TGCTCCTCCAACGTG | 15/15 | 1 | 1 |
| 2801 | YYLTR | TACTACCTCACCCGT | 14/15 | 4 | 4 |
| 2827 | WLGNI | TGGCTAGGCAACATA | 15/15 | 3 | 3 |
| 2832 | IMFAP | ATCATGTTGCCCCCA | 15/15 | 4 | 7 |
| 2844 | LMTHF | CTGATGACCCATTTC | 15/15 | 7 | 9 |
| 2845 | MTHFF | ATGACCCATTTCTTT | 15/15 | 6 | 6 |
| 2863 | DCEIY | GATTGCGAGATCTAC | 13/15 | 1 | 6 |
| 2864 | CEIYG | TGCGAGATCTACGGG | 14/15 | 0 | 1 |
| 2898 | PGEIN | CCAGGTGAAATTAAT | 15/15 | 34 | 29 |
| 2917 | RAWRH | CGAGCTTGGAGACAC | 15/15 | 2 | 0 |
| 2967 | SGWFT | TCCGGCTGGTTCACG | 14/15 | 2 | 4 |
| 2990 | WIWFC | TGGATCTGGTTTTGC | 15/15 | 12 | 4 |

[1] Pentapeptide amino acid position along the viral polyprotein.

[2] Pentapeptide amino acid sequence in one-letter code.

[3] Pentadecameric oligodeoxynucleotide sequences corresponding to the pentapeptides unique to HCV1a derive from GenBank database, accession no. M62321,[33] Nucleotide sequences shown in DNA form. Each pentadecameric oligodeoxynucleotide sequence was used as a probe to scan the entire human NCBI nucleotide collection for exact matches using BLAST (blastn) program with no gaps allowed.

[4] Identities refer to matches with no gaps allowed; 15/15 indicates a perfect pentadecamer match; 14/15 indicates a perfect tetradecamer match; etc.

[5] Oligodeoxynucleotide sequence occurrences.

[6] Including intron, untranslated regions, pseudogene, and/or frameshift location(s).