

Additional file 1. Alignment of a sample of 20 assembled sequences of the sunflower whole genome database (inbred line HA412-HO, numerical codes, below) to Sanger sequences from the small insert library described in Cavallini et al. (2010) (inbred line HCM, HAG codes, above)

Query= HAG001C01F
Subject= 73340

```
HAG001C01F: 1 ccgtctagacaagttgtggtttcatcaagagggcatcagttaagacctgttcatataaataat 60
|||||
73340: 982 ccgtctagacaagttgtggtttcatcaagagggcaccagttaagacctgttcatataaataat 923

HAG001C01F: 61 tttgtctcctgcaagcccagagactttacaggagaaaatggggccatcgattgcatgaca 120
|||
73340: 922 tttatctcctgcaagcccagagactttacaggagaaaatggggccatcgattgcatgaca 863

HAG001C01F: 121 tggcttgatgaaatggacgctggtggtgacatcagcgattgtgcgagcaagatggttg 180
|||||
73340: 862 tggctcgatgagatggacgctggtggtgacatcagcggttggtgcgagcaagatggttg 803

HAG001C01F: 181 aaatttgttcacaatcatttaaaggagaagcggttgcatggtggagatcattactcaa 240
|||||
73340: 802 aaatttgttcacaatcatttaaaggagaagcggttgcatggtggagatcattgctcaa 743

HAG001C01F: 241 gccacggggaagattctactctacaacttatcttggggccaatttggtgcattaatcaaa 300
|||||
73340: 742 gccacggggaagattctactctacaacttatcttggggccaatttggtgctttagtagcaag 683

HAG001C01F: 301 gaaaactattgccctcagcatgaagtagaaaagatagaatcggacttctgacgttggtc 360
|||||
73340: 682 gaaaactattgccctcagcatgaagtagaaaagatagaatcagacttctgactttggtc 623

HAG001C01F: 361 atggaaaatttgaactgtcaggcatacgtgacaagtttcaacactatgtcccgcctagtc 420
|||||
73340: 622 atggaaaatttgaattgtcnggcatangtgacaagtttcaacactatgtcccgcctagtt 563

HAG001C01F: 421 ccttatttagtcacccctgaacctaaacgcatagcgcggtttcattggaggcctagcacca 480
|||||
73340: 562 ccttatttagtcacccctgaacctaaacgcatagcgcggtttcattggaggcctagcacca 503

HAG001C01F: 481 gagataaaaggaaatgtaaagcatctaggccaaccacatataggttcgcggtggactta 540
|||||
73340: 502 gagataaaaggaaatgtaaagcatctaggccaaccacatataggttcgcggtggactta 443

HAG001C01F: 541 tcctatctctcaccttagatgcaatcagatttaagtctgttaaggcttct 591
|||
73340: 442 tcctatctctcaccttagatgcaatcagaattaagtctgttaaggcttct 392
```

Query= HAG001C03F
Subject= 46146

```
HAG001C03F: 1 cctaacaacaacagggccaatgataagatttacttaggaactaaaccaagacgtgctggg 60
|||||
46146: 74 cctaacaacagacagggccaatgataagatttacttanaanctaaanccaagacgtgctggg 133
```


HAG001C09F: 121 tttgctattggtacacttgaaggaaacgcgctttcatggtggaagcgcagattcaaatg 180
 ||||| ||||| || || |||| | || ||||| ||||| ||||| ||||| |||||
 42764: 1271 tttgctactggtactctngagggaagcgcactttcntggtggaaggcgcgaattcaaatg 1212

HAG001C09F: 181 cttggtttggaaactgccaatgctactgcatgggaagatttcaaggacatgatcaaggaa 240
 ||||| ||||| | ||| || ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 1211 cttggtttggagantgctaangctactgcatgggaagatttcaaggatgatgatcaaggaa 1152

HAG001C09F: 241 gagtactgtcacagggatgacatttacaactcgaaaatgagtactttgagctcaagatg 300
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 1151 gagtantgtcacagggatgacatccacaaactcgaggacgagtactatgaactcaagatg 1092

HAG001C09F: 301 gttggatcagagatcgagacctacaccaaatagtccaacgactatgctgctctgtgcca 360
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 1091 nttgggtcagagattgagacctacaccaagctgtccaacgactatgctgctcttgncca 1032

HAG001C09F: 361 aacatgtctcgacctatgtatcgaaggattgaattgtacatcaagggttggccccagaa 420
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 1031 aacatgtcccgaccnatgtaccgaaggatcgaattgtacatcaaggcttagtcccagag 972

HAG001C09F: 421 attcggagccatgtgacctcagccaacctcaataccattcagccagtcgtccgtcttgct 480
 || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 971 atcaggagccatgtgacctcggccaacctcactaccatacagccnntngttcgncttgn 912

HAG001C09F: 481 cacaaactcactgatcaggctgtggaacagggaagttgccccaaaaggatcagtgctact 540
 ||||| ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 911 cacaaactcacnancaggcngtgaagagggcnnngttgccccaaaaggatcagtgntncn 852

HAG001C09F: 541 gctggaacttctggtgataacaagcgttaagtgggaaggaaacaaaacaaggatgctaac 600
 | ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 851 gnnggaacttctagtganngcaancgnaagtggganggaantcannngcaaggatgctaac 792

HAG001C09F: 601 ccactcaggtcccatctcagcaaaggaaaactgaaaacaacaaggccctcagcaacag 660
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 42764: 791 ccactcaggccccagctcagcaaaggaaaacngaaaacaacaaggcactcancaacag 732

HAG001C09F: 661 ggtggcta 668
 |||||
 42764: 731 ggtggcta 724

Query= HAG001C21F

Subject= 218181

HAG001C21F: 1 attgtagattggcacataagatcgttgaccaggaggtggagagcgcactcattgccacct 60
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 218181: 151 attgtagattggcacataaaatcgttgaccaggaggtggagagcgcactcattgccacct 210

HAG001C21F: 61 cgtatttctagcactaccacagctgccactacttccactgcatctgctgctgatagcaaa 120
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 218181: 211 cgtatttctagcactaccacagctgccactacttccactgcatctgctgctgatagcaaa 270

HAG001C21F: 121 cgtaagtggaacgatacggacaaggggtccaactctgcacagcctcagaagaagacggat 180
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 218181: 271 cgtaagtggaacgatacggacaaggggtccaactctacacagcctcagaagaagacggat 330

HAG001C21F: 181 actggcagcaccgcagttccagtcagacagcatcagtgaatcagaactcgagtaacaaa 240
|||||
218181: 331 actggcagcaccgcagtttcagtcagacagcatcagtgaatcagaactcgagtaacaga 390
|||||

HAG001C21F: 241 tcagggcagggatcatatgcggggaagctacccttgtgcagcaagtgtgactatcatcac 300
|||||
218181: 391 tcagggcagggatcatatgcggggaagctacccttgtgcagcaagtgtgatcttcatcac 450
|||||

HAG001C21F: 301 aagggacagtgtgctcgggtttgtcatcgatgtaatcgaccagggcatatggctagggat 360
|||||
218181: 451 aagggcagtgactcgagtttgttatcgggtgtaatcgaccagggcacaaggccagggat 510
|||||

HAG001C21F: 361 tgtagggccacttttccagctcagcagcagccatcacagcagatgggtaggcaacaatct 420
|||||
218181: 511 tgtaggaccacacttccagctcagcagcagccagcgcagcagggcgggtaggcaacagcct 570
|||||

HAG001C21F: 421 caacaaaatcaggggtactcagagaggggtgttatcagtgtggagccgaggggcacttcaag 480
||
218181: 571 cagcaactcagggtaatcagaaaggggtgttatcagtgtgggcccaggggcacttcaag 630
|||||

HAG001C21F: 481 cgagactgccctcaactgaagcagaatacaggggggtgtaacgggaacaacaatgcgggg 540
|||||
218181: 631 cgagactgccctcagctganncagaacacagggggngtaacgggaacaacaatgcgggg 690
|||||

HAG001C21F: 541 aacaatgcgggtaatgtcgcgcggtggcgcggggtttgtggtgggagc-tgggtaagcgcg 599
||
218181: 691 aanaanggggtaatgttcgcgcggtggcgcggggtttgtgctgggagcgtggggaagcgcg 750
|||||

HAG001C21F: 600 gaacgacggcaatgtgggtactgggtacgttttcagtgaaacgggtgttattgcttctat 659
|||||
218181: 751 gaacgacggcaacgtgggtacnggtacgttttcngtnaacgggtgttattgcttctat 810
|||||

HAG001C21F: 660 atttgattctgggtgccgactggagttacgtgtcttt 695
|||||
218181: 811 atttgattctgggtgccgactggagttacgtgtcttt 846
|||||

Query= HAG001E19F
Subject= 65097

HAG001E19F: 1 cgacatcaaatagatcgagctcttacatgtttctattcatctattgctgatatgcagaaa 60
|||||
65097: 547 cgacatcaaatagaccaagctcttacatgtttctattcatctattgctgatatgcaaaaa 606
|||||

HAG001E19F: 61 gaagtctcattaaaatgttttatctcgtagatagagcccagaacctacaaagaggcattg 120
||
65097: 607 ga-gtctcattaaaatgttttatctcgtagatcgagcccagaacctacaaagaggcattg 665
|||||

HAG001E19F: 121 actgaggatagttgggtgaatgcaatgcaggaggagctacaacagttcga--aaagctgg 178
|||
65097: 666 actaaggatagctgggtaaatgcgatgcaggaggagctgcaacaatttgacaaaagctgg 725
|||||

HAG001G05F: 241 tgttggaagggcaatatgaggaagttcatgcgatccaaggtcaaggccaaggaggaggtg 300
 |||
 44213: 3055 tgttggaagggcaatatgaggaagtccatgcggttcaaggtcaaggtcaaggaggaggtg 2996

HAG001G05F: 301 gtaggaactacaacaacatgaattctaatacctaccaccccggttgaggaatcacccga 360
 |||
 44213: 2995 gtaggaactacaacaacatgaattctaatacctaccaccccggttgaggaatcacccga 2936

HAG001G05F: 361 actttagatatgggaaccggtcaaatcaagcgaacccaaattttcaaggtagccaaggta 420
 |||
 44213: 2935 actttagatatgggaaccggtcaaatcaagcgaacccaaattttcaaggtagccaaggta 2876

HAG001G05F: 421 attttggttcacggccatcttataataaccaaggtgggtaccggggcggaataaccaag 480
 |||
 44213: 2875 attttggttcacggccatcttanaataaccaaggtgggtaccgnggcggaataaccaag 2816

HAG001G05F: 481 ggtatcaaaaacaatacacaacgggtcaagagcaaaggggatcttcgggtggaacgagg 540
 |||
 44213: 2815 ggtatcaaaaacaatacacaacgggtcaagancaangggntcttcgggtggaangagg 2756

HAG001G05F: 541 tgatggagatgcttaaaagcatgcaattggaaatgcaaaaagcggaatcaacttgatgaag 600
 |||
 44213: 2755 tgatggagatgctnaanagcatgcaantggnatgcaaaaancggaancaacttgatgaag 2696

HAG001G05F: 601 tgcggatgcaaaaagatgaggttcgngataaaaagcattcagtcactaacgactcaaatgg 660
 |||
 44213: 2695 tgcgnatgcaaaaagatgaggttcgngataaaaagcattcactaacacccaatgg 2636

HAG001G05F: 661 g 661
 |
 44213: 2635 g 2635

Query= HAG001G21F
 Subject= 46419

HAG001G21F: 1 tcctcgggatgaggttcagaagctggaaaacgagtactatgacttgaagatggttgatc 60
 |||
 46419: 759 tcctcgggatgaagtccagaagttggaaaacgagtactacgacttgaagatggttgatc 700

HAG001G21F: 61 tgaagtcgaagcgtatatgaagcgatcgtatgaattggcggacatgtgccgaacttgtc 120
 |||
 46419: 699 tgaagtcgaagcgtatgtgaagcgatcgtatgaactggccgacatgtgccgaacttgtc 640

HAG001G21F: 121 ccggcctatgtctcggaggattgagttattcatcaaggggttgctccgcgtgtgaagag 180
 |||
 46419: 639 ccggcctatgtctcggaggattgagttattcatcaaggggttgctccgcgtgtgaagag 580

HAG001G21F: 181 tttggtcactgcagcccatctcaatgatttgacacagattggttcgattgaccacaagat 240
 |||
 46419: 579 cttggtcactgcagcccatctcaatgatttgacacagatcgttcgtctgactcacaagat 520

HAG001I11F: 181 gaatcattatgCGactcaggacccccattaatcatactatagccttaattttaaaccctag 240
 |||
 93740: 528 gaatcattatgCGactcaggacccccattaatcatactatagccttaattttaaaccctaa 469

HAG001I11F: 241 tcgtcatgatcaaaatacgcgtaagcccttggtttgatttgtaacttttattttgtctat 300
 |||
 93740: 468 tcgtcatgatcaaaatacgcgtaagcccttggtttgatttgtaacttt--atttgtctat 411

HAG001I11F: 301 atgccattataaccggttgaacatattctaacagacgtacagaatcaaacttgaggaaatt 360
 |||
 93740: 410 atgccattataaccggttgaacatattctaagagacatacaaaatcaaacttgaggaaatt 351

HAG001I11F: 361 tcgttaatcataaaacataagctagtagcattatgctcaaataaggctcttactaaatccc 420
 | |||
 93740: 350 tnattaa-cataaaacataagctagtagcaaatatgcttaaataaggctcttactaaatccc 292

HAG001I11F: 421 atattccgaacatggttcttcgtaaaccttagggagggagaccttttagtcatcggatccgca 480
 |||
 93740: 291 atattccgaacatggttcttcgtaaaccttaggnngggagaccttttagtcatcggatccgca 232

HAG001I11F: 481 agcatatccttagtactaataatactcgatacaaaagattatcttctcaactcgttcacgt 540
 |||
 93740: 231 agcatatccttagtactaataatactcgatacaaaagattatcttctcaactcgttcacgt 172

HAG001I11F: 541 acaaatagatatttcgatatcgagatataaaccagctccagtcgaactggtactggttcgag 600
 |||
 93740: 171 acaaatagatatttcgatatcgagatataaaccagctccagtcgaactggtactggttcgag 112

HAG001I11F: 601 aaactaacggcagctgaattatcacagtagagcttcaatggcttagaaatg 651
 |||
 93740: 111 aaactaacggcagctgaattatcacagtaaagcttcaatggcttagaaatg 61

Query= HAG001K01F
 Subject= 47464

HAG001K01F: 1 catgaagtGacacttctGCCaattcaacataagttttaactCGacacaccgcttaaacat 60
 |||
 47464: 1120 catgaagtGacacttctcccaatttagcataagcttCGtctctacacaccgcttaaacat 1061

HAG001K01F: 61 cttggtgagattcttcaaacactcatcaaaggagttGCCatataccgaaaaatcttccat 120
 | | | |
 47464: 1060 cctttccaaattcttcaaacacacatCGaaagaatcaccataaactgaaaaatcatccat 1001

HAG001K01F: 121 gaaaacctccatggaactctcaatcatatcctgaaatatggcaacctgcatcGctgaaa 180
 |||
 47464: 1000 gaaaacctccatggaagtctctatcatatcctgaaatatggcnancatgcaacgntgaaa 941

HAG001K01F: 181 ggtagctggagcgttacatagcccaaatggcatgCGtCGgaacgcataggtGCCataggg 240
 |||
 47464: 940 agtagctggagcgttacatancccaaatggcatgCGtCGgtacgcataggtGCCataggg 881

HAG001K01F: 241 gcatgtaaaagtgggtcttatcctgatcctccagtgCGatggggatctggaagtaccCGga 300
 |||
 47464: 880 gcatgtgaaggtgggtcttatcctgatcctccngtCGatggggatctggaagtanccaga 821

HAG001M15F: 361 gaagaacaagaaagtgaaaaacagacacatgagttaaacaacgaaaatggtgagtgccgat 420
|||||
67655: 957 gaagaacaagaaagtgaaaaaccgacacatgagttaaacaacgaaaatggtgagtgccgat 898

HAG001M15F: 421 aatgttaaaattcaagaagagtctaattttgaggaaattattctcttgtcacactattc 480
|||||
67655: 897 aatgttaaaattcaagaagagtctaattttgaagaaattaatctcttgtcacactattc 838

HAG001M15F: 481 gaaaatcattgtttaataaccctcatgccaaagtttttaaagagttaaacactaatgct 540
|||||
67655: 837 gaaaatcattgttantaaccctcatgccaaagtttttaaagagttaaacactagtgtc 778

HAG001M15F: 541 aaaatcaatgacttagtaagtgttaagttaactaatgatcaaacctcgctaataaaagaa 600
|||||
67655: 777 aaaatcaaaganttagtaagtgttaagttaactaatgatcaaacctcgctaataaaagaa 718

HAG001M15F: 601 gatccttttgaaattaacattacaccggttccatgtttctttcaaaattcgtttatttag 660
|||||
67655: 717 gatccttttgaaattaacattacaccggttccatgtttctttcaaaattcatttatttag 658

HAG001M15F: 661 catatcactattgataangatctttgt 687
|||||
67655: 657 aatatcaccattgataaangatctttgt 631

Query= HAG001O17F
Subject= 67629

HAG001O17F: 1 ccataaccaggcccaaattcatttgcggaagcggaatagttttaagactccgagtg 60
|||||
67629: 916 ccataaccaggcccaaattcatttgcggaagcggaatagttttaagactccgagtg 857

HAG001O17F: 61 gtgaatctcttaccattcgaggggatacgattgcccgaagacgtatctatgc 120
|||||
67629: 856 gtgaatctcttaccattcgaggggatacgattgcccgaagacgtatctatgc 797

HAG001O17F: 121 tgaaagcttcaaggtgtttgaacagaggctgtgtaatttacatggctcaggtgataattg 180
|||||
67629: 796 tgaaagcttcaaggtgtttgaacagaggctgtgtaatttacatggctcaggtgataattg 737

HAG001O17F: 181 aagaaccaaggccgaagatcgaggatcttctgtcatttctgaatacccgaggttttc 240
|||||
67629: 736 aagaaccaaggccgaagatcgaggatcttctgtcatttctgaatancccgaggtttnc 677

HAG001O17F: 241 ctgaagaactacctggtttgccaccagatagacaagtggagttcagaattgacatcattc 300
|
67629: 676 cngaagaactacctggtttgccaccagatagacaagtggagttcagaattgacatcatnc 617

HAG001O17F: 301 ctggagcagctccgatagcagcagccttacagattagcgccaacgaaatgaaagaac 360
|||||
67629: 616 ctggagcagcncnatngcnagagcagccttacagnntagcaccacgaaatgaaagaac 557

HAG002A15R: 360 caaaacttacatgtatt 376
|||||
67322: 533 caaaacttacatgtatt 517

Query= HAG002A23R
Subject= 43451

HAG002A23R: 1 tgcctctgtggtgcgccacgtttataagggtccttggctagaccaatacagaggttatat 60
||||| |||||||
43451: 67 tgcctccgtggtgcgccacgtttataagggtccttggctagaccaattcccggtcacac 126

HAG002A23R: 61 gt--tttctgagtgggatgcttggcgtcacatgttacaccgtcggagagcagcatccaag 118
|| ||||| ||||| ||| | || || || || |||||
43451: 127 gtcatttctgattgggggtgccttgcctcccaagttacaccgtcggagagcggcatccaag 186

HAG002A23R: 119 cttgaatcaataaccttcatgtaattgaccgggtcgtcgtcctctattcttcccaact 178
||||| || ||||||| ||||| | ||||||| ||||||| |||||||
43451: 187 cttgagtcgataaccttcatgtagtgaccgggtcgtcatcctctattcttcccaact 246

HAG002A23R: 179 ccgaactttacttcatcatccccatacctcaagggtgagtgttccgtcattcataatctacc 238
||||||| ||||| ||||||| ||||| || ||||| || ||||| || ||
43451: 247 ccgaactttacctcatcgtccccatacctcaangttagtgcccttcatcattcatgtccact 306

HAG002A23R: 239 actgcttgggcggtggcaaggaagggtctccctagatgagggggacctcgggtgtcttcc 298
||||||| ||||||| ||||| || ||||||| || ||||||| |||||||
43451: 307 actgcttgtgcggtggcaaggaaggcctccctagaataagggggacctcgttgtcttcc 366

HAG002A23R: 299 tccatatcgagtatgacaaagtcggctggatagacgaatctgcttacctttaccaagaca 358
||||| ||||||| ||||||| | ||||| || || ||||||| |||||||
43451: 367 tccatgtcagagtatgacaaagtcaacaggataaacaacactgcttacctttaccaagaca 426

HAG002A23R: 359 ttttcgatgacaccttgtggaaatttgaccgatcgatcagcgagttgtatgctcattttt 418
|| ||||||| ||||||| || || ||||| ||||||| ||||||| |||||||
43451: 427 ttctcgatgacaccttgcgggaacttgaccgatcgatcagcgagttgtatgcttattttt 486

HAG002A23R: 419 gtaaggctcgtggttccccagccaagcctttt 450
||| ||||||| |||||||
43451: 487 gtagggctcgtggttcccaagccaagcctttt 518

Query= HAG002B02F
Subject= 44213

HAG002B02F: 1 atagatgacggtaatatcaaaactactaaccaaaatttatgatgtgtgctttgtgtaat 60
||||||| ||||| ||||||| ||||||| ||||||| |||||||
44213: 3149 atagatgaaggtaatgttcaaaactactaaccaaaatttatgatgtgtgtgctttgtgtaat 3090

HAG002B02F: 61 gagataggtcacgcggtgaaaattgccaaggaatggttgaagggaatagaggaagtc 120
|| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
44213: 3089 gaaataggtcangcggtgaaaattgccaaggaatggttgaagggaatagaggaagtc 3030

HAG002E01F: 61 atagccacgaccacgtccgtgacttccactttggtcattatatgttgccacattcacttc 120
 |||
 41457: 1757 atagccacgaccacgtccgtgacttccactttggtcattatatgttgccacattcacttc 1698

HAG002E01F: 121 tgggaatgggggtgtaccaaccggacaagtttcatggtttttcatcagtagctcattatt 180
 |||
 41457: 1697 tgggaatgggggtgtaccaaccggacgagtttcatggtttttcattagtagctcattatt 1638

HAG002E01F: 181 ttgctcagccacaagcaaacatgatattaagtcactgtattttgggtgaagcccctttcacg 240
 |||
 41457: 1637 ttgctcagccacaagcaaacatgatattaagtcactgtattttgggtgaagcccctttcacg 1578

HAG002E01F: 241 atattgttggtgcaagacaatgtttgaggcgtgaaaggtggagaatgtttttccaacat 300
 |||
 41457: 1577 atattgttggtgcaagacaatgtttgaggcgtgaaaggtggagaatgtttttccaacat 1518

HAG002E01F: 301 ctcttatctgtaatatcttccaccatagaatcaattgtgacgtgattctaaacattgc 360
 |||
 41457: 1517 ctcttatcagtaatatcttccaccatagaatcaattgtgacgtgattctaaacattgc 1458

HAG002E01F: 361 tgagttatactcacttatagacttaaagtcttgcaaccttaaattaatcattcataacg 420
 |||
 41457: 1457 tgagttatactcacttatagacttaaagtcttgcaaccttaaattaatcattcataacg 1398

HAG002E01F: 421 agctcttggtaatattactgttttctgatggtcatacctttcttttaaattgatccatag 480
 |||
 41457: 1397 agctcttggtaatattactgttttctgatggtcatacctttcttttaaattggtccatag 1338

HAG002E01F: 481 aacgagtggtatctttgatagtaagatattcatttttcaatgactcatgaatatggtggcg 540
 |||
 41457: 1337 gacgagtggtatctttgatagtgagatattcatttttcaatgactcatgaatatggtggcg 1278

HAG002E01F: 541 taagaaaatcattgcctttgctttttcttggtacttgttttatttccttctttaattgt 600
 |||
 41457: 1277 taagaaaatcattgcctttgcttttatcttggtactcgttttatttccttctttaattgt 1218

HAG002E01F: 601 atccccaaggttattggcatttagatggatttcatcatccaaagcccatgataaataatt 660
 |||
 41457: 1217 atccccaaggttattggcatttagatggatttcatcatccaaagcccatgataaataatt 1158

HAG002E01F: 661 ttttcagtgatgtctaaagccataaactcaagctttgcaagattcgacatgattaa 717
 |||
 41457: 1157 ttttcagtgatgtctaaagccataaactcaagctttgcaagattcgacatgattaa 1101

Query= HAG002F11F
 Subject= 43835

HAG002F11F: 1 aagacgctctactttgccgcgcaacgtctaaagcaactatgggttcaatcttggttga 60
 |||
 43835: 204 aagacgctctactttgccgcgcaacgtctaaagcaactatgggtttaaacttggttga 263

