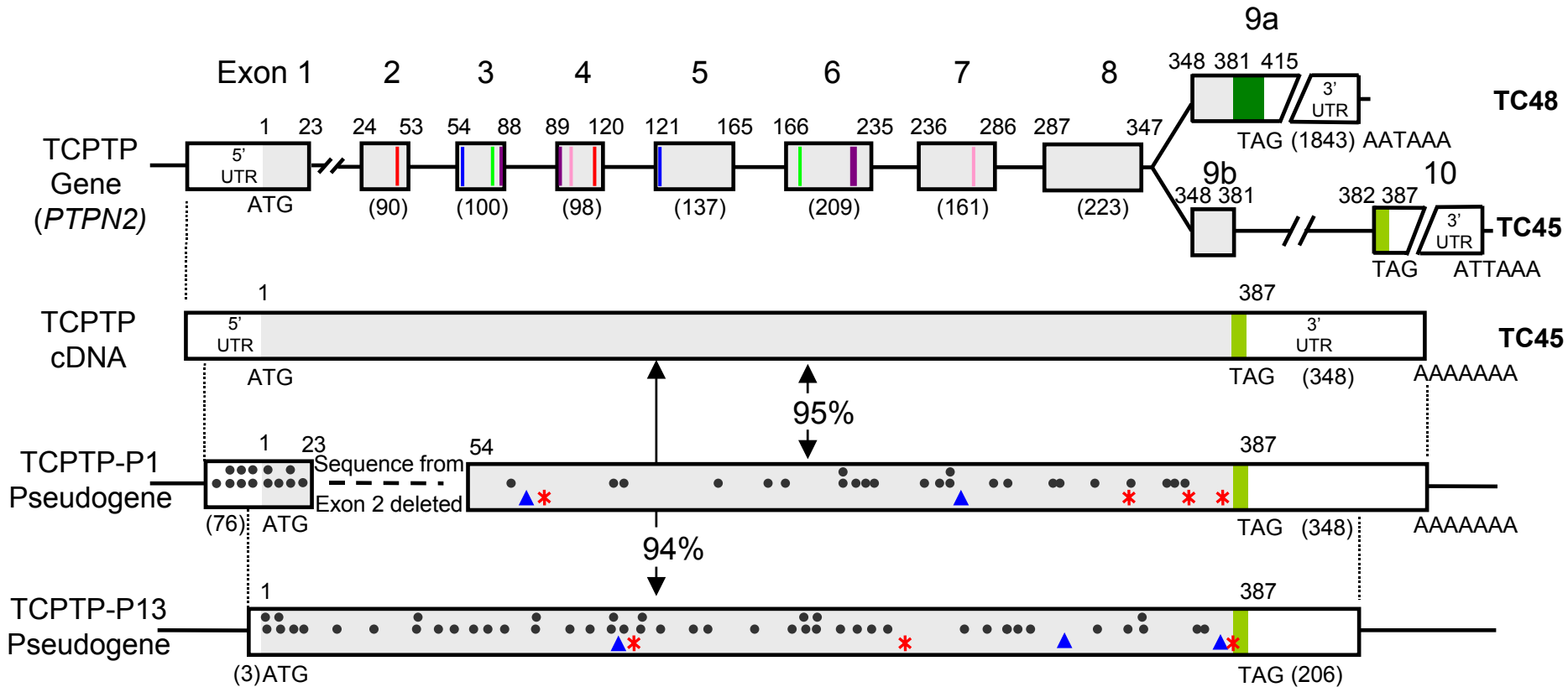


Identification of two retrotransposed genomic sequences on chromosome 1q25.1 and 13q12.3 with homology to TCPTP cDNA

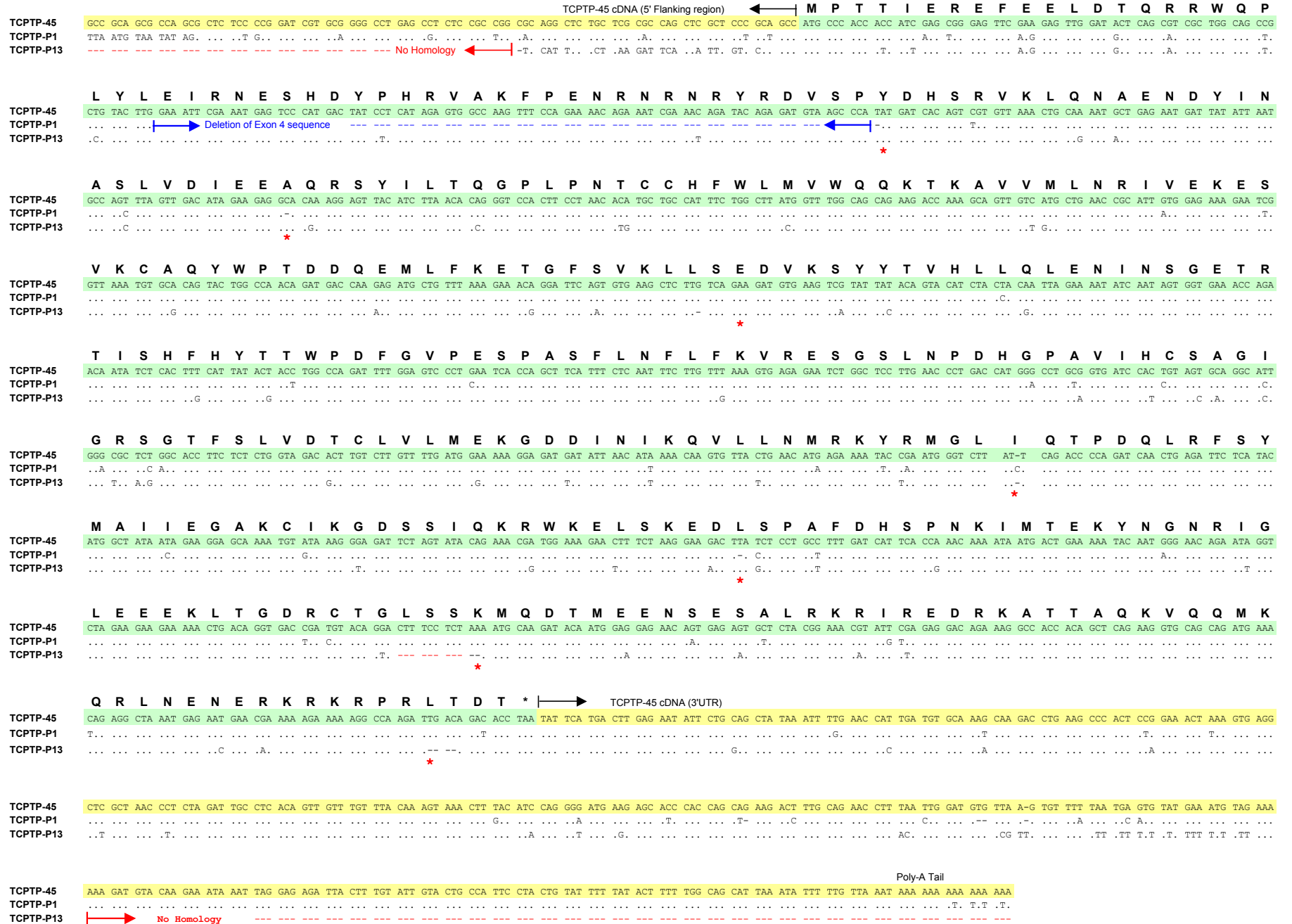
TCPTP gene structure and cDNA is compared to pseudogenes TCPTP-P1 and TCPTP-P13



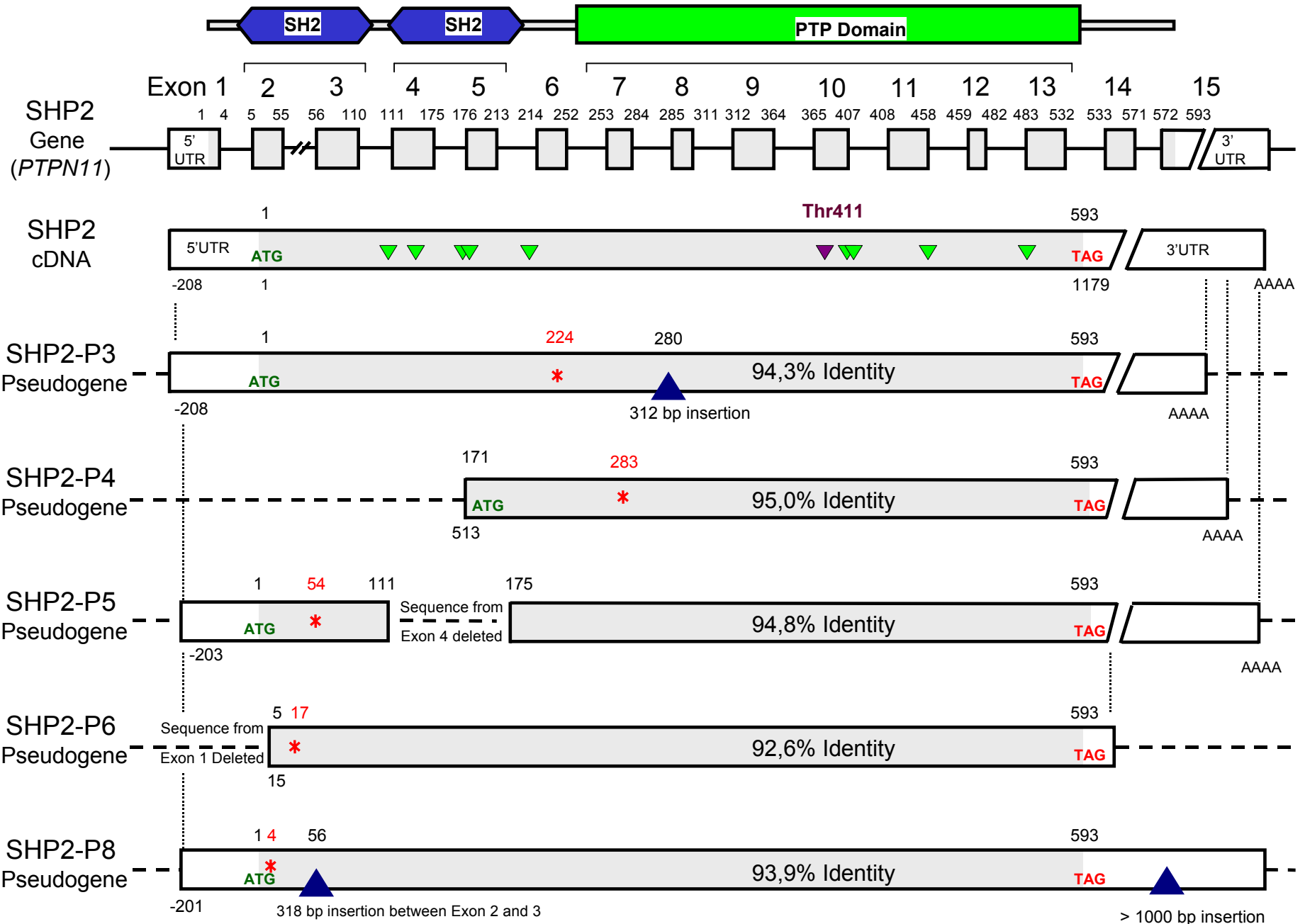
PTP Motifs: NxxKNRY...DxxRVxL...DYINA...YIATQGP...TxxDFWxMxW...IVMxT...KCxxYWP...WPDxGxP...PxxVHCSAGxGRTG...QTxxQYxF

- Mutation in pseudogene
- ▲ Deletion or insertion
- * In frame stop codon

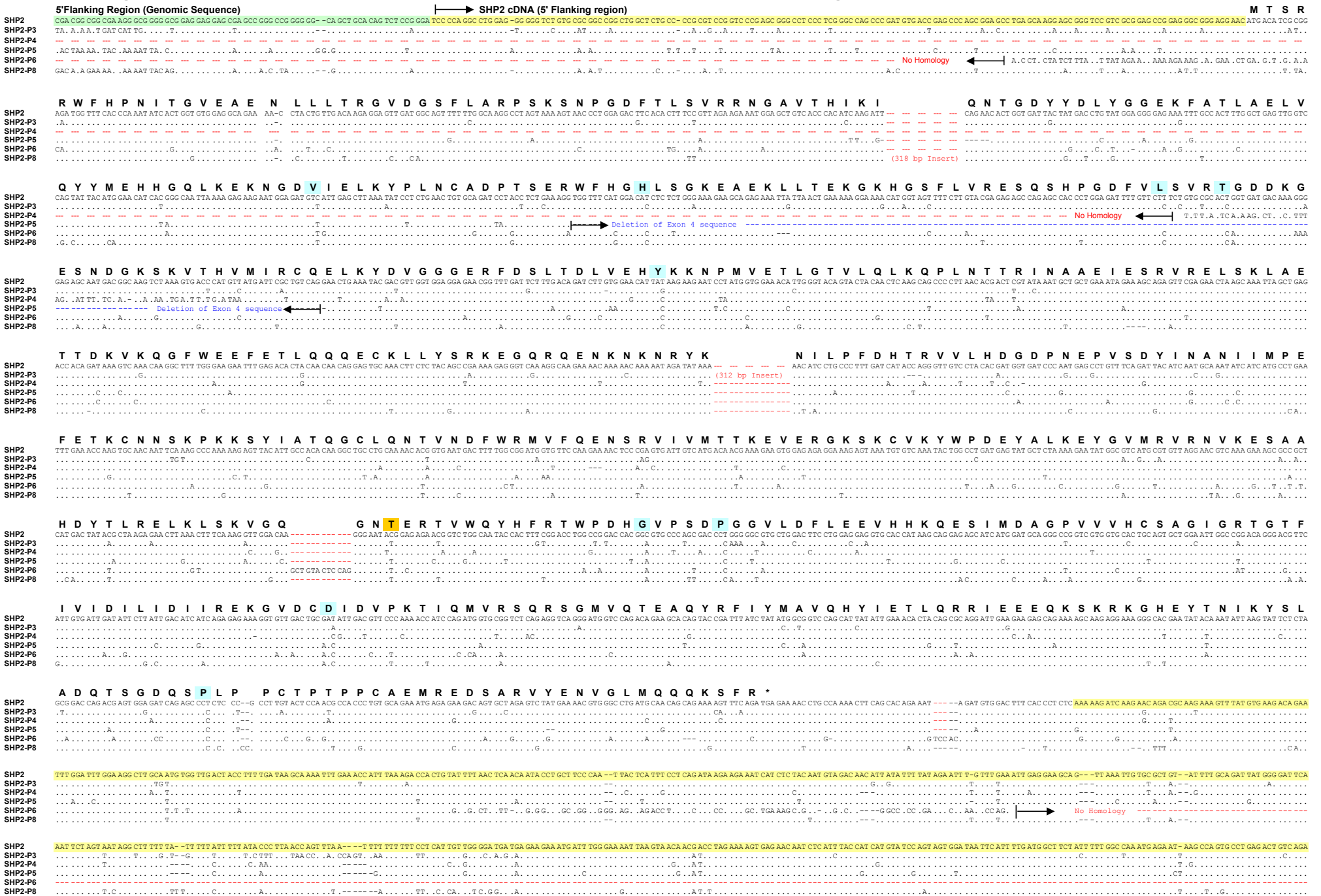
Alignment of TCPTP (cDNA) with its pseudogenes TCPTP-P1 & -P13 (genomic sequence)



Identification of five processed SHP2 pseudogenes in the human genome



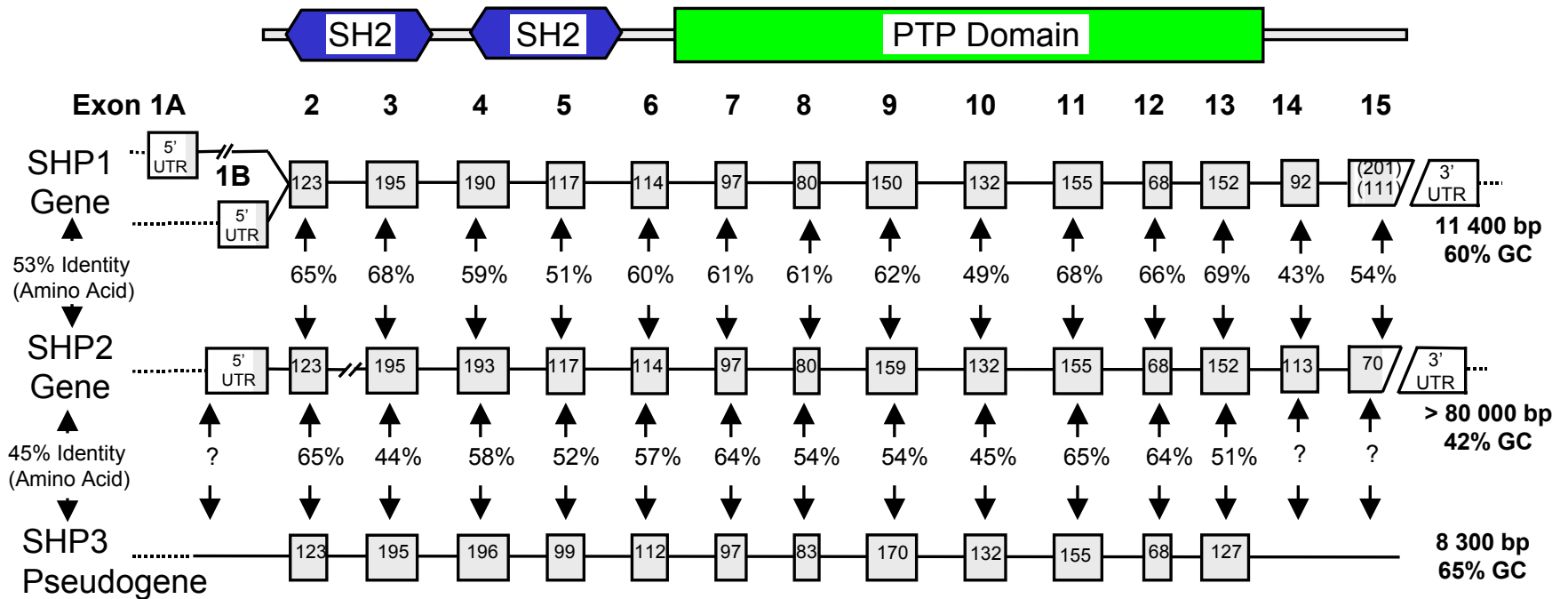
Alignment of modern SHP2 cDNA with its retrotransposed SHP2 pseudogenes on chromosomes 3, 4, 5, 6 and 8



Alignment of modern SHP2 cDNA with its retrotransposed SHP2 pseudogenes on chromosome 3, 4, 5, 6 and 8

<p>SHP2 SHP2-P3 SHP2-P4 SHP2-P5 SHP2-P6 SHP2-P8</p>	<pre> TAT TTT TAG AGG TTA TTT TAT TGG GGA TTT TAA GAA CTA ATA ACA TCT TGA GTT ATT TTT AAT TCA GGG GGA TGT GGA AAG GTT TGC AAT TGT CAA GTG TTT TGT TGT AGC TTA GTA TCC ATA AGG GAA ACT TAG ACT ATA GAC ATA ACT ACA AAG CCA GTG CAG CTT TTG TTT TCT GTA TGT TGT TGG GGG A-T CAA C-T TTC ACA CAT AGC AAG CAC ATG GCC TCC CTG ATG TCA GGAG...T.....C.....A.G..A.....C..A.....G.....T.....A...GT...T...T.G.....A.....G.....C...G.....A.T.....T.G.....C.....A.C...GT...C...T.....G.....A.....T.....G.....A..T.....G.....A..T.....T.....A.....GT.....T..... </pre>
<p>SHP2 SHP2-P3 SHP2-P4 SHP2-P5 SHP2-P6 SHP2-P8</p>	<pre> TGC CTT TGT TAG GAT CTG TAT TTG CCC TTA ATT TTG TTG AAA TCT TTT TTC CTT CTT CCI CTT GAA AAG TTC CAA AAT ATA GTT TAT TGT ATC TTT CAT CAC TAA AAA TTT GTT CCT TTT TCA CTA TGG GCA GTT CAC ACA AGG CAA AAA CTA TTG AAC AGT TGG TTT TAG TGT GTT GTA TAA CTT TGC TGT ATA TCA AAC TAA TTT TGA CAA GTT TTC ATC CTA AGC CTC AAA TCA TGTT..G.....C.....C.....G...A.....C.....CA.....A.....A...C.....G.....T.....CA.....C.....A.....TG.....C.....C.....C.....G.....C.....A.....A.....AGC.....T.....T.....CA.....G...CA..... </pre>
<p>SHP2 SHP2-P3 SHP2-P4 SHP2-P5 SHP2-P6 SHP2-P8</p>	<pre> AAT TAA TAA TTT GCC TGT TTA TTT ATG ACC TAA TTG TGA TTC TTT TAT TAA TAA AAG CTA ATG GGA AAA GGA TCC CTG ATT AAG CTG ATG ACT AGA CCT ACA ATT AAT TTT CCT GCA CTA TAT GAA GTA TTG TAC CAG ACT AT-TAA AAG ATA TGT A-A TAT TTT ATT GAT AAA TCT ATC CTT TAA AAG G-- -A ATA CCT TTT AGG ATG TC-ATC ATT TTG A-T CFG AAT CAT GTA AATTAA...A.A.....C.CACA.A.A.TA.....A-----TAT.T...A..T...A..C.C.C.A--A.C..TGT.AC..TG..A.T.GT.GCAA.-----> No Further Homology -----C.....A.....ATAT..A-----T.....T.....C.....T.....G.....A.....T.....A--TG..AA...T.....G.....T.....T..... </pre>

Identification of SHP3 – a pseudogene with apparent exon structure on chromosome 1p36.32



SHP2 protein aligned with the apparent readingframe and exon structure of the SHP3 pseudogene

