



**Supplementary Figure 2** Triangular dot-plots of a revised human X-ampliconic region containing the *PNMA6* gene family. **a**, The previous multi-haplotype reference sequence. Each dot represents 100% nucleotide identity within a window of 100 nucleotides; direct repeats appear as horizontal lines, inverted repeats as vertical lines, and palindromes as vertical lines that nearly intersect the baseline; gaps are indicated by gray shading. Black arrows immediately below plots denote positions and orientations of amplicons. Further below, sequenced clones from RP-1 and RP-11 libraries (each from a different individual) contributing to the assembly are depicted as orange and green bars, respectively; each bar reflects the extent and position within the assembly of finished sequence for that clone. (As per the human genome assembly standard, finished-sequence overlaps between adjoining clones are limited to 2 kb.) Genbank accession numbers are in Supplementary Table 1. **b**, SHIMS assembly of same region. All clones derive from ABC-8 library (one male) and are fully sequenced and in blue; each clone's finished sequence extensively overlaps those of adjoining clones.