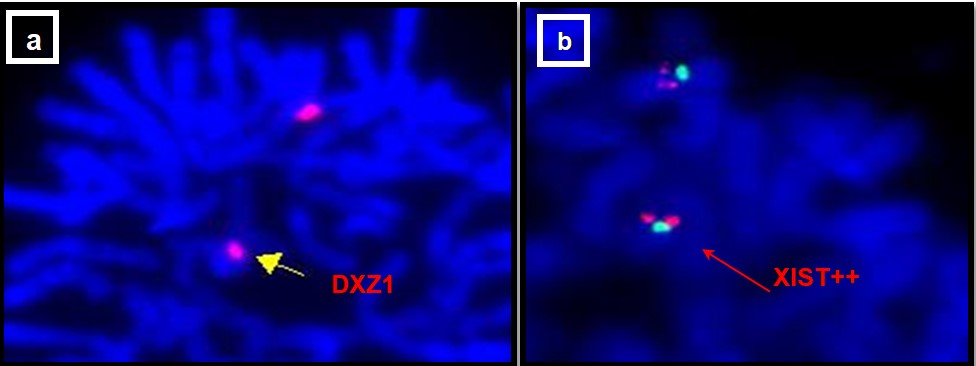
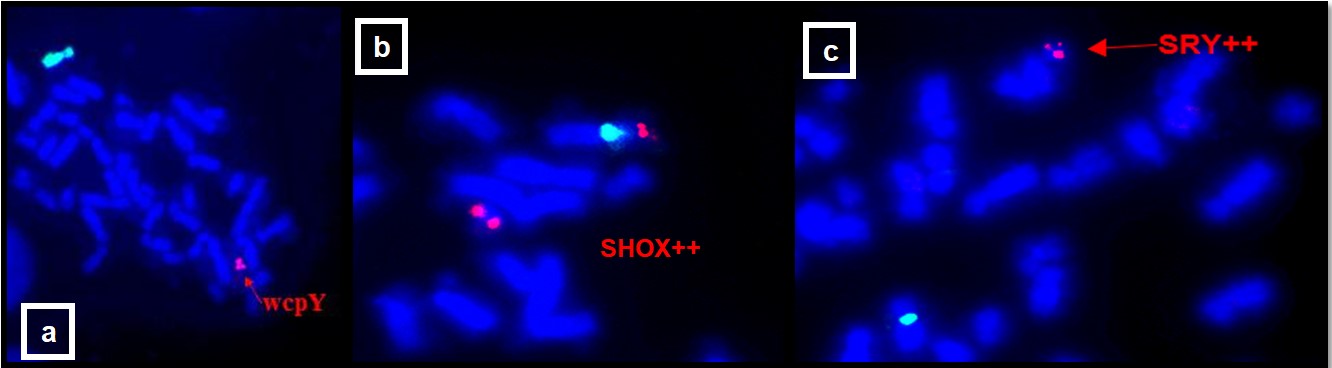
**PARTICIPANT 3**



**Figure S1.** FISH results for participant 3. Partial metaphases showing the presence of a ring chromosome derived from chromosome X: (a) one copy of DXZ1 (red), and (b) two copies of XIST (red), indicated by yellow and red arrows, respectively.

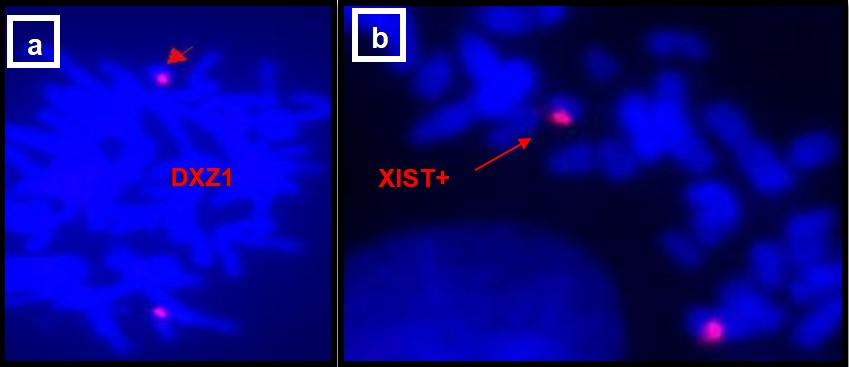
**PARTICIPANT 4**



**Figure S2.** FISH results for participant 4. Partial metaphases showing the presence of an sSMC derived from chromosome Y: (a) signal of wcp Y (red); (b) one copy of DXZ1 (green) and two copies of SHOX (red); and (c) one copy of DXZ1 (green) and two copies of SRY (red), all indicated by red arrows.

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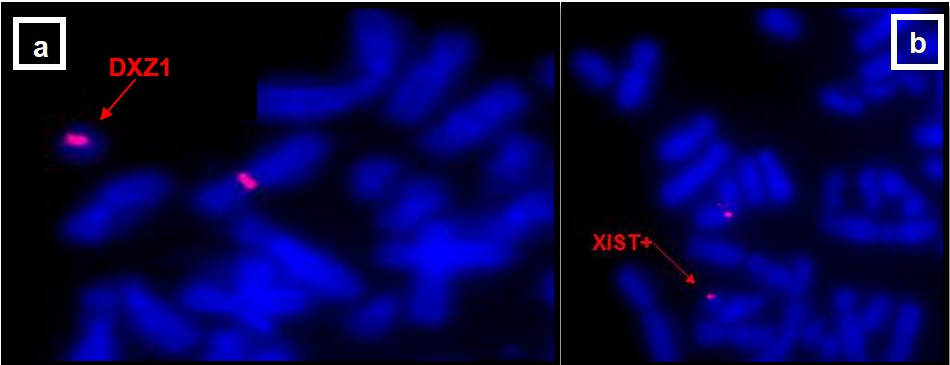
**PARTICIPANT 5**



**Figure S3.** FISH results for participant 5. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) one copy of XIST (red), all indicated by red arrows.

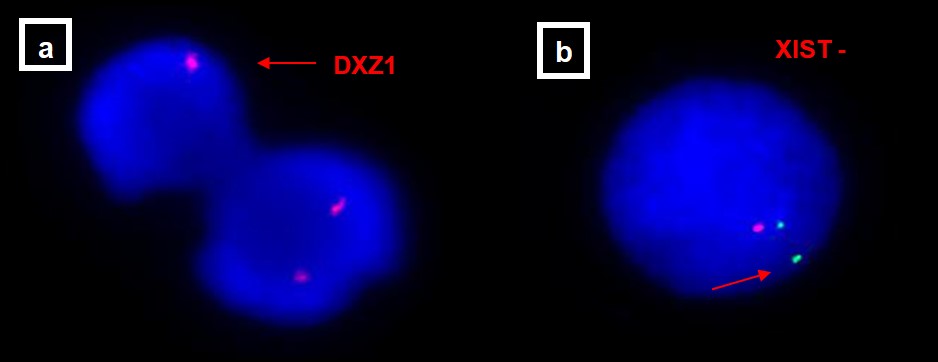
**PARTICIPANT 6**

**PARTICIPANT 6**



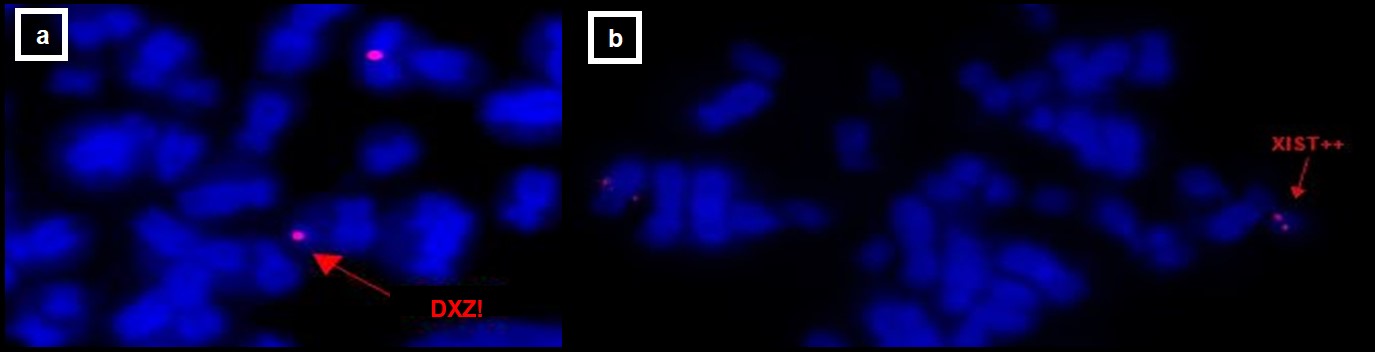
**Figure S4.** FISH results for participant 6. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) one copy of XIST (red), all indicated by red arrows.

**PARTICIPANT 7**



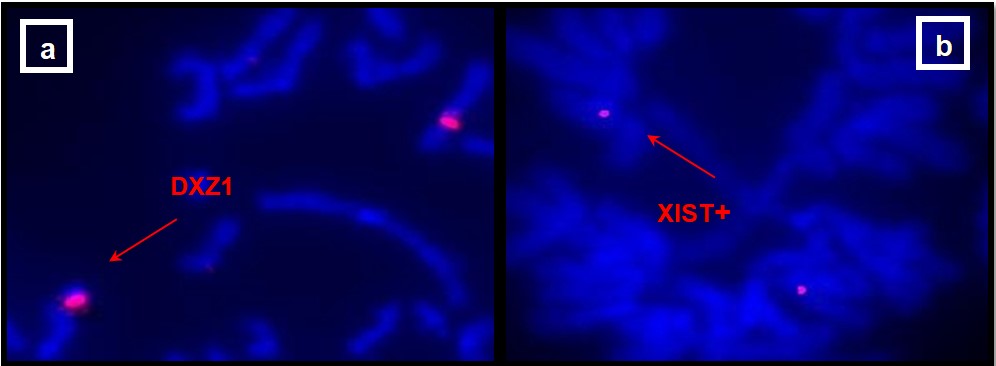
**Figure S5.** FISH results for participant 7. Interphase cells showing an sSMC derived from chromosome X: (a) one copy of DXZ1 (red), and (b) XIST negative, all indicated by red arrows.

**PARTICIPANT 8**



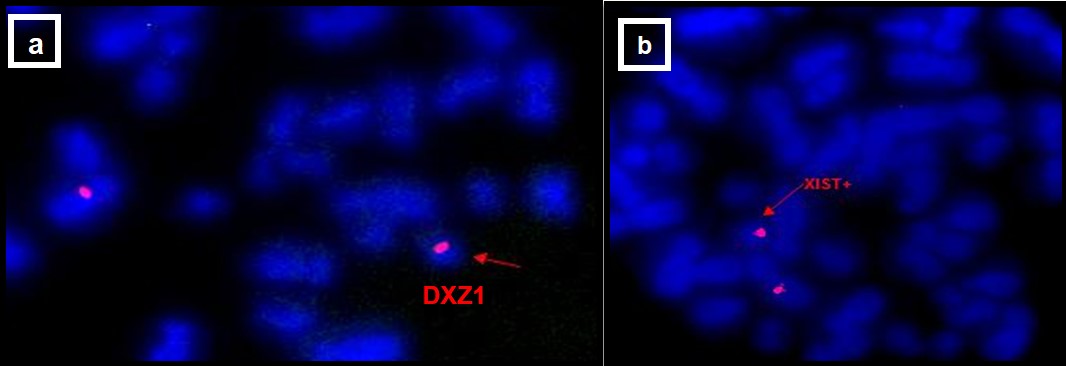
**Figure S6.** FISH results for participant 8. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) two copies of XIST (red), all indicated by red arrows.

**PARTICIPANT 10**



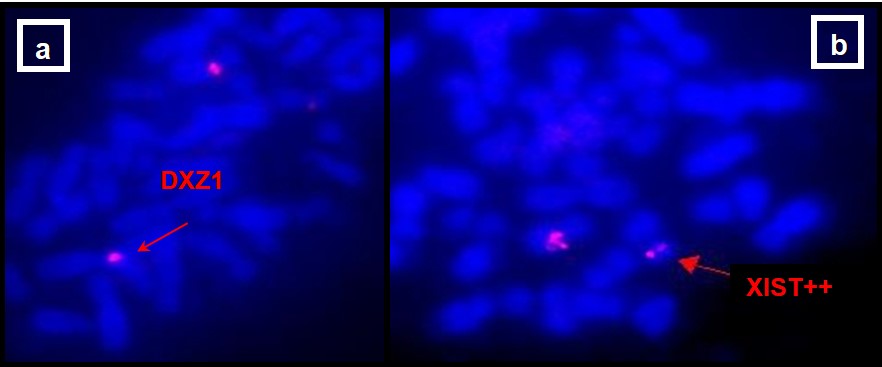
**Figure S7.** FISH results for participant 10. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) one copy of XIST (red), all indicated by red arrows.

**PARTICIPANT 11**



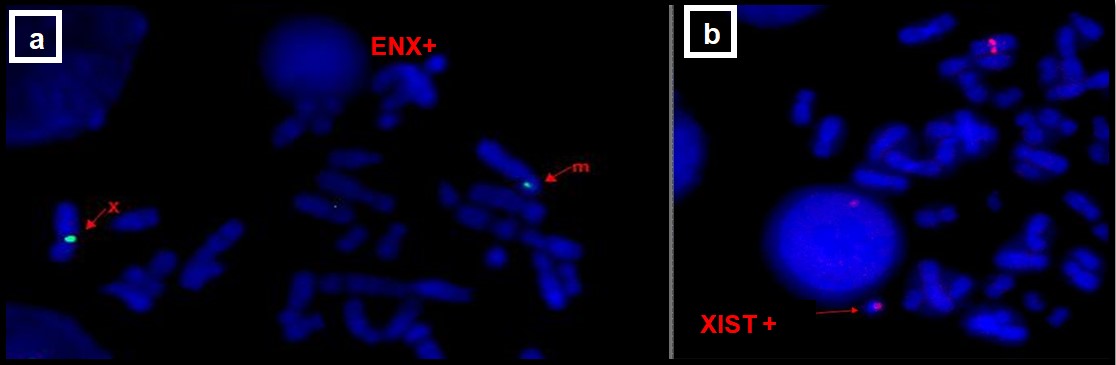
**Figure S8.** FISH results for participant 11. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) one copy of XIST (red), all indicated by red arrows.

**PARTICIPANT 12**



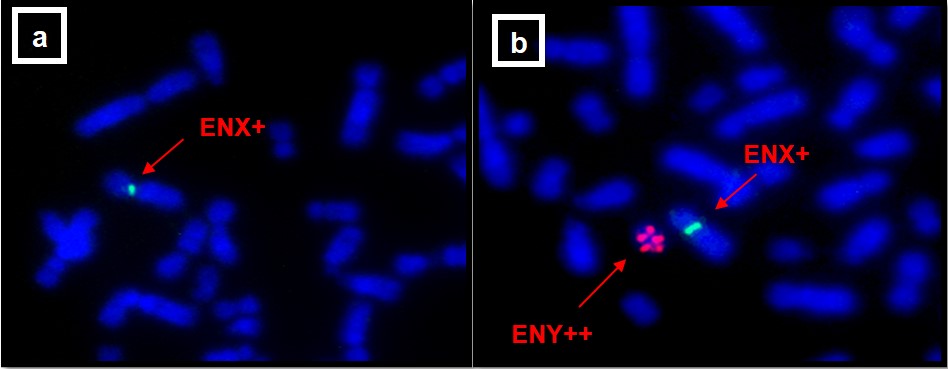
**Figure S9.** FISH results for participant 12. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) two copies of XIST (red), all indicated by red arrows.

**PARTICIPANT 13**



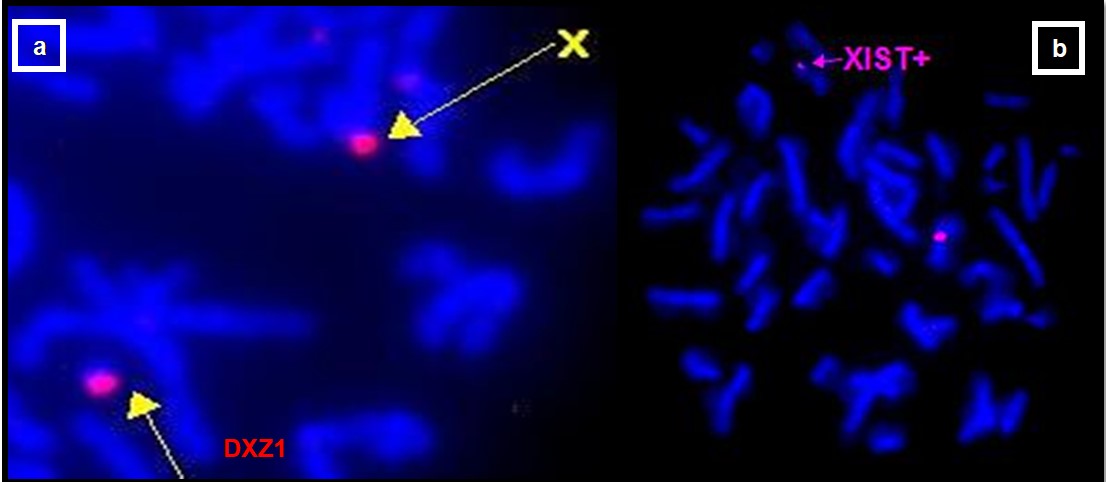
**Figure S10.** FISH results for participant 13. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of ENX (green, and (b) one copy of XIST (red), all indicated by red arrows.

**PARTICIPANT 14**



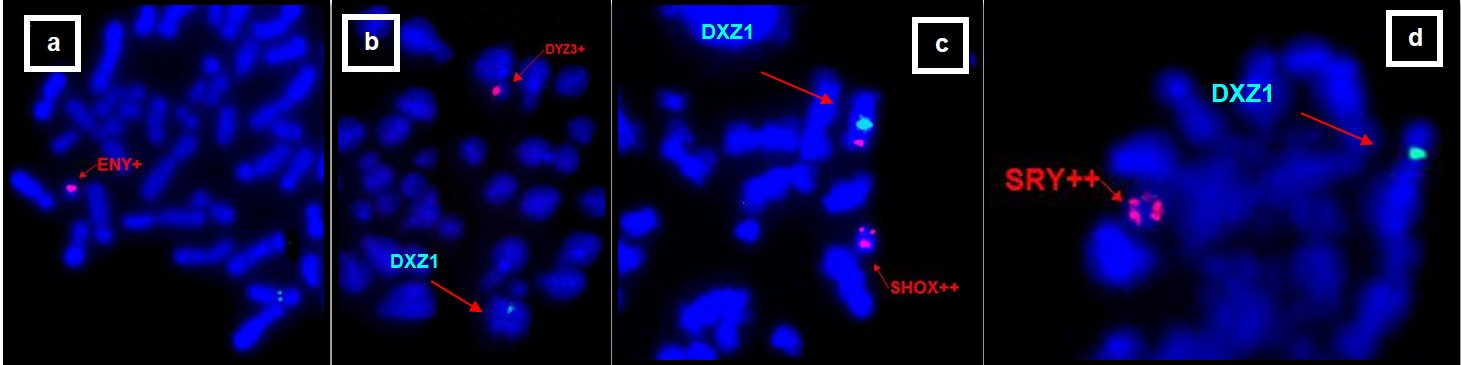
**Figure S11.** FISH results for participant 14. Partial metaphases showing the presence of an sSMC derived from Y chromosome: (a) one copy of ENX (green), and (b) one copy of ENX (green) and two copies of ENY (red), all indicated by red arrows.

**PARTICIPANT 16**



**Figure S12.** FISH results for participant 16. Partial metaphases showing the presence of an sSMC derived from X chromosome: (a) one copy of DXZ1 (red), and (b) one copy of XIST (red), indicated by yellow and red arrows, respectively.

**PARTICIPANT 17**



**Figure S13.** FISH results for participant 17. Partial metaphases showing an isochromosome for short arm of Y chromosome: (a) one copy of ENY (red); (b) one copy of DXZ1 (green) and one copy of DYZ3 (red); (c) one copy of DXZ1 (green) and two copies of SHOX (red); and (d) one copy of DXZ1 (green) and two copies of SRY(red), all indicated by red arrows.