

Short tandem repeat analysis of WTC hiPSC line

Description of method/analysis: Used Promega Powerplex 16 System to verify short tandem repeat polymorphisms for 15 loci (plus amelogenin)^{1,2} in WTC hiPSC line. Analysis was done by WiCell Cytogenetics³.

Sample	Donor fibroblasts	WTC line
Concentration (ng/ μ L)	52.40	181.90
A260/280	1.71	1.93
FGA	22,25	22,25
TPOX	8,11	8,11
D8S1179	11,13	11,13
vWA	17,19	17,19
Penta_D	9,11	9,11
CSF1PO	10,12	10,12
D16S539	9,10	9,10
D7S820	10,12	10,12
D13S317	8,11	8,11
D5S818	9,10	9,10
Penta_E	13,15	13,15
D18S51	12,21	12,21
D21S11	29,29	29,29
TH01	6,7	6,7
D3S1358	15,16	15,16
Allelic polymorphisms	29	29

Results: These samples define STR profiles of the human stem cell lines as indicated by name. The genotypic profiles comprise 29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: These results suggest that the stem cells submitted correspond to the cell line as named and were not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

Sensitivity: Sensitivity limits for detection of STR polymorphisms unique to either this or other human stem cell lines is ~2-5%.

¹WTC has an Amelogenin Y (AMELY) variant that causes the WTC line to be misidentified as female (XX). AMELY variants and sex mis-typing have previously been reported in several populations

²Tozzo, P. et al. (2013). Deletion of amelogenin Y-locus in forensics: Literature revision and description of anovel method for sex confirmation. Journal of Forensic and Legal Medicine. 20(5): 387-391.

³<https://www.wicell.org/home/characterization/identity/short-tandem-repeat-str/short-tandem-repeat-str.cmsx>