iPSC Characterization Report

Information Summary

Organization: Neural Stem Cell Institute (NSCI)
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SCRC Code: NSCI10

Sample Name: FTD-FF

Number of the Established iPSC Clones: 6

Characterization Performed:

1. Mycoplasma Test
2. Cell authentication Verification
3. Presence of the Pluripotency Marker
4. Spontaneous differentiation via embryoid body (EB) formation
5. Karyotyping

Qualified iPSC Clones: C1, C3, C4

iPSC Characterization Report

Mycoplasma Test

Method: Determination of the mycoplasmal enzyme activity using Lonza MycoAlert Plus Detection kit.

iPSC Clone	NSCI10-C1	NSCI10-C3	NSCI10-C4
Cell passage	P6	P6	P6
B/A Ratio	0.52	0.84	0.44
Mycoplasma	NEG	NEG	NEG
Pass or Fail	Pass	Pass	Pass

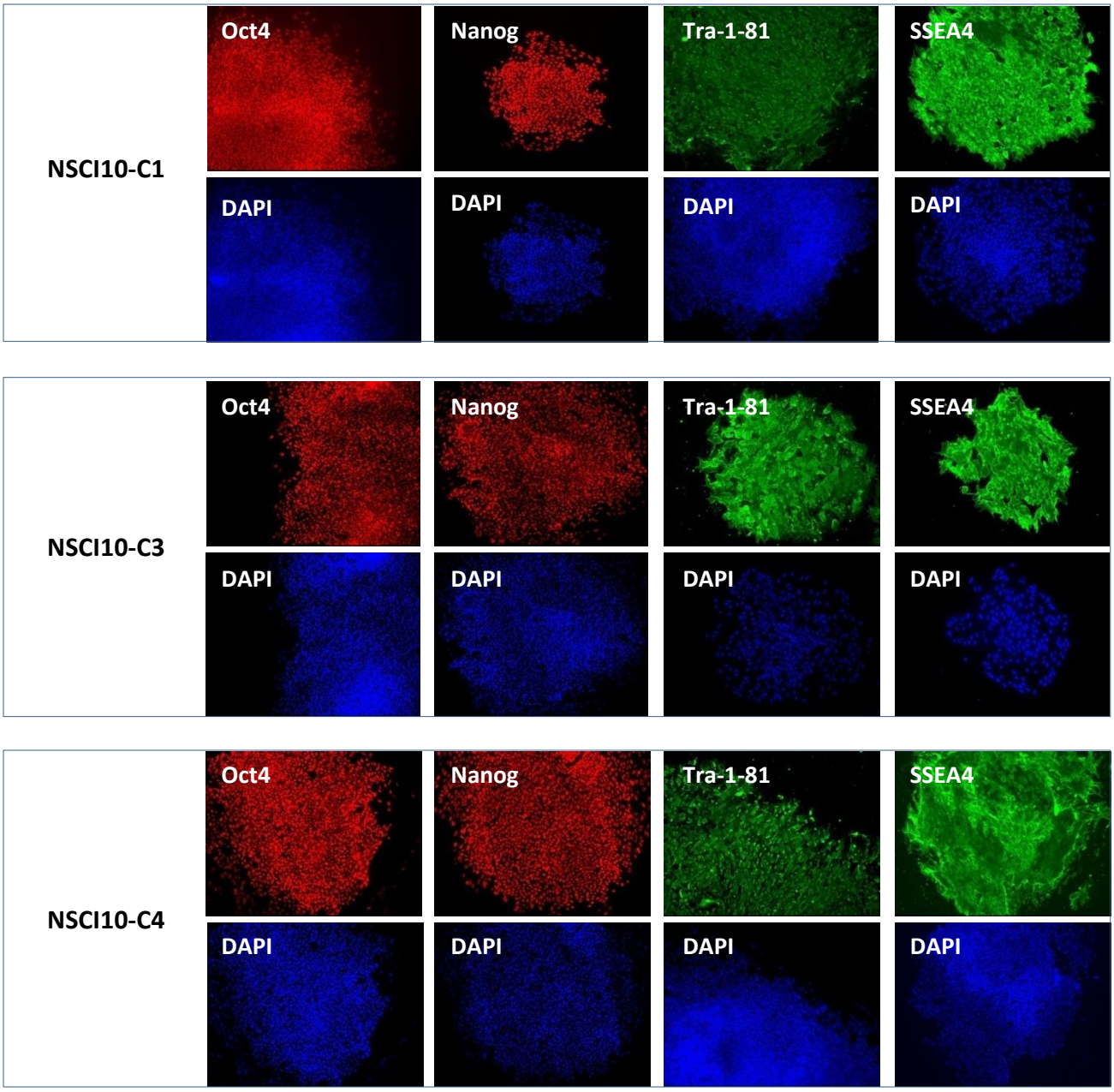
Cell Authentication Verification

Markers	NSCI10 (FTD-FF)	NSCI10-C1	NSCI10-C3	NSCI10-C4
D3S1358	15, 16	15, 16	15, 16	15, 16
TH01	6	6	6	6
D21S11	30, 33.2	30, 33.2	30, 33.2	30, 33.2
D18S51	16, 19	16, 19	16, 19	16, 19
Penta E	13, 14	13, 14	13, 14	13, 14
D5S818	11, 13	11, 13	11, 13	11, 13
D13S317	11	11	11	11
D7S820	10, 11	10, 11	10, 11	10, 11
D16S539	11, 13	11, 13	11, 13	11, 13
CSF1PO	11	11	11	11
Penta D	11, 12	11, 12	11, 12	11, 12
vWA	14, 18	14, 18	14, 18	14, 18
D8S1179	13, 14	13, 14	13, 14	13, 14
TPOX	10, 11	10, 11	10, 11	10, 11
FGA	22, 23	22, 23	22, 23	22, 23
AMEL	X	X	X	X
Match with original Fibroblast		**Yes**	**Yes**	**Yes**

iPSC Characterization Report

Expression of the Pluripotency Markers

Antibody staining for pluripotency markers: Oct4, Nanog, Tra-1-81, SSEA-4



iPSC Characterization Report

Differentiation Potential via EB Formation

Method: The iPSC cells were disassociated into small clumps to form EB in the low attachment dish. After a 10-day spontaneous differentiation, the EBs were harvested and RNAs were extracted . The expression levels of the selected 3-germ layer specific genes were analyzed by real-time PCR. Ct values are normalized for loading using a housekeeping gene.

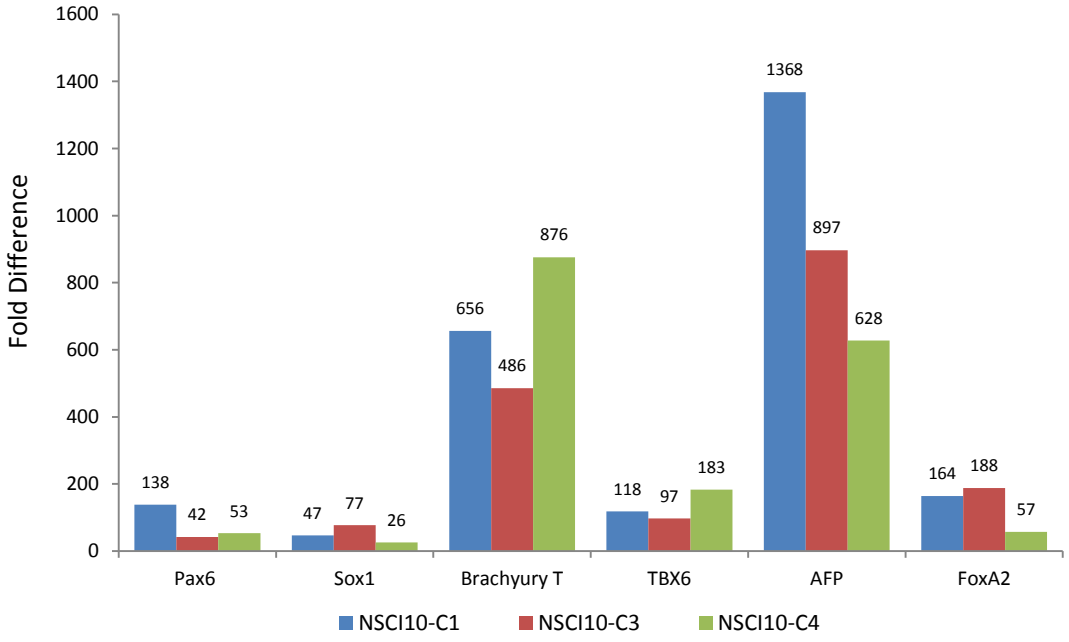


Figure: Lineage specific gene expression following EB differentiation. Fold difference is shown relative to undifferentiated iPS cell.

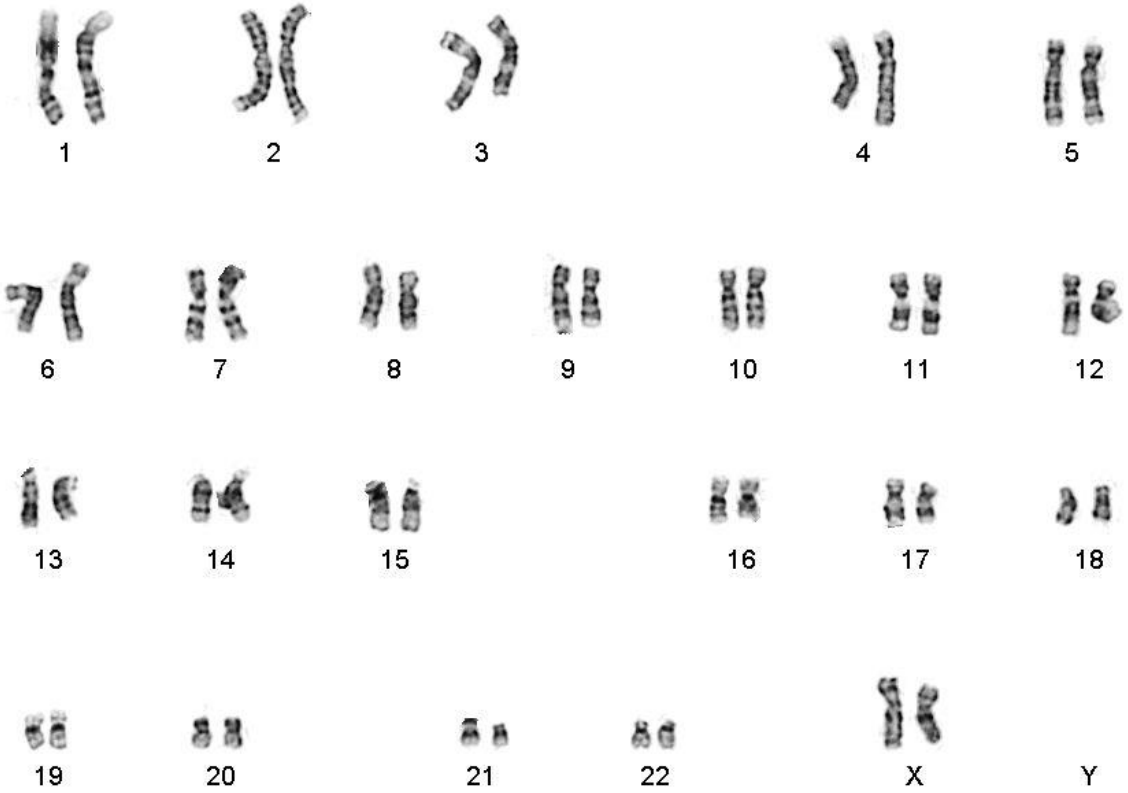
iPSC Characterization Report

Karyotyping

Clone: NSCI10-C1
Passage: P7

Tested: Number of metaphases counted: 20 Banding and level: GTG/450
Number of metaphases analyzed: 6 Number of karyotypes: 2

Result: 46,XX NORMAL FEMALE KARYOTYPE



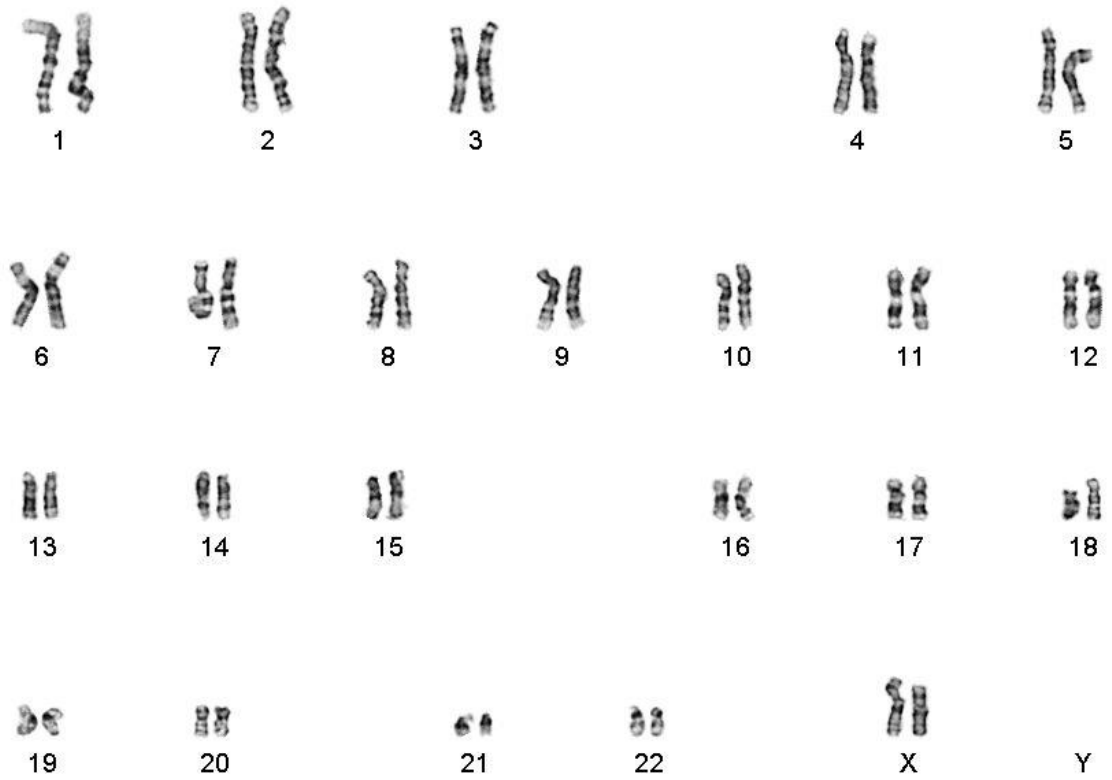
iPSC Characterization Report

Karyotyping

Clone: NSCI10-C3
Passage: P7

Tested: Number of metaphases counted: 20 Banding and level: GTG/550
Number of metaphases analyzed: 6 Number of karyotypes: 2

Result: 46,XX NORMAL FEMALE KARYOTYPE



iPSC Characterization Report

Karyotyping

Clone: NSCI10-C4
Passage: P6

Tested: Number of metaphases counted: 20 Banding and level: GTG/450
Number of metaphases analyzed: 6 Number of karyotypes: 2

Result: 46,XX NORMAL FEMALE KARYOTYPE