

# iPSC Characterization Report

## Information Summary

**Organization:** Neural Stem Cell Institute (NSCI)  
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**SCRC Code:** NSCI2

**Sample Name:** GIH-169

**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, C2, C3

# iPSC Characterization Report

## Mycoplasma Test

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

iPSC Clone	NSC12-C1	NSC12-C2	NSC12-C3
Cell passage	P6	P6	P6
B/A Ratio	0.23	0.75	0.70
Mycoplasma	NEG	NEG	NEG
Pass or Fail	Pass	Pass	Pass

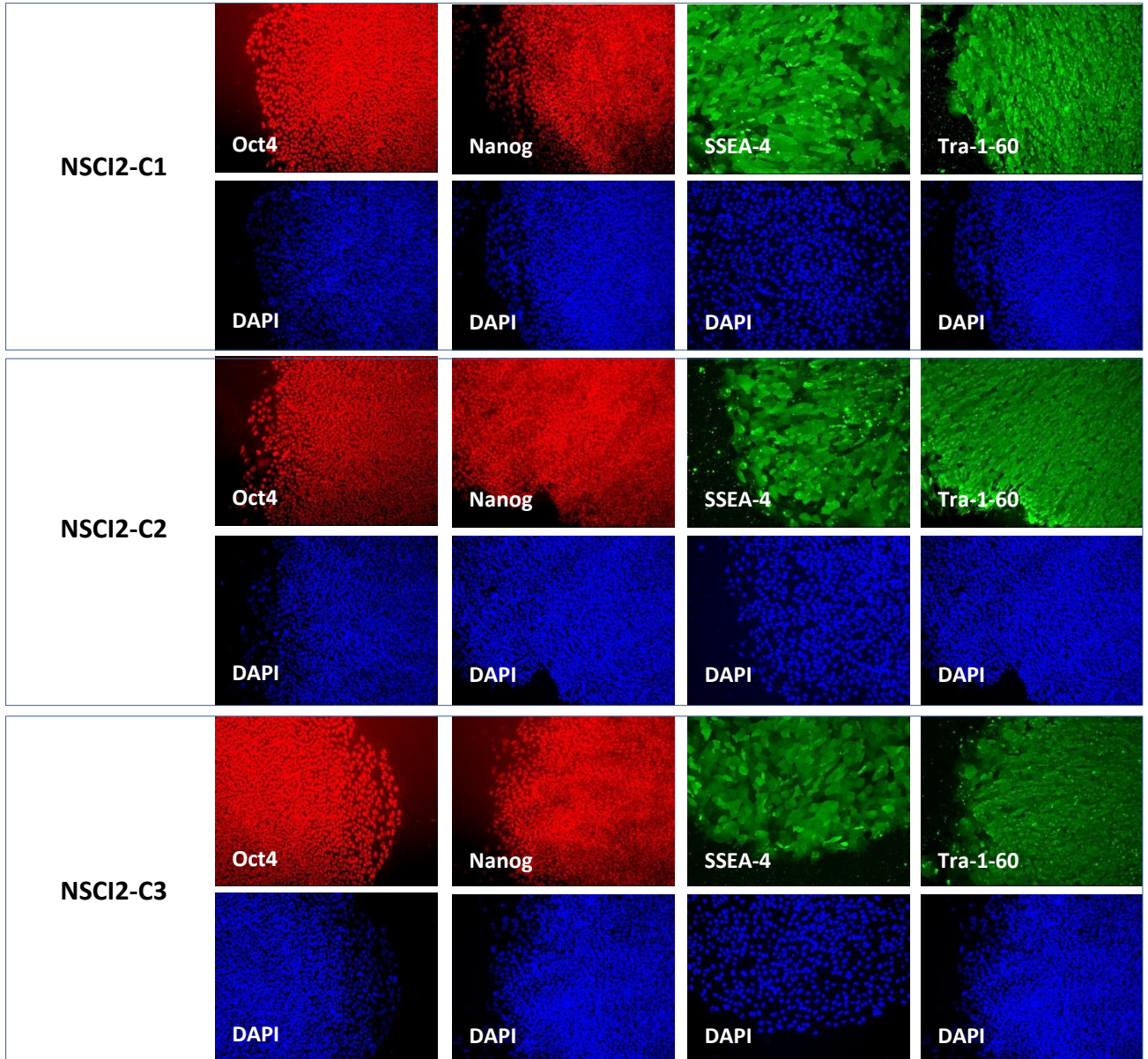
## Cell Authentication Verification

Markers	NSC12 (GIH-169)	NSC12-C1	NSC12-C2	NSC12-C3
D3S1358	15	15	15	15
TH01	6, 7	6, 7	6, 7	6, 7
D21S11	27, 28	27, 28	27, 28	27, 28
D18S51	14, 17	14, 17	14, 17	14, 17
Penta E	7, 12	7, 12	7, 12	7, 12
D5S818	12, 13	12, 13	12, 13	12, 13
D13S317	11, 12	11, 12	11, 12	11, 12
D7S820	10	10	10	10
D16S539	9, 12	9, 12	9, 12	9, 12
CSF1PO	12	12	12	12
Penta D	9, 12	9, 12	9, 12	9, 12
vWA	17, 18	17, 18	17, 18	17, 18
D8S1179	11, 13	11, 13	11, 13	11, 13
TPOX	8	8	8	8
FGA	24	24	24	24
AMEL	X	X	X	X
<b>Match with original Fibroblast</b>		<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

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## Expression of the Pluripotency Markers

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



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## Embryoid Body (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.

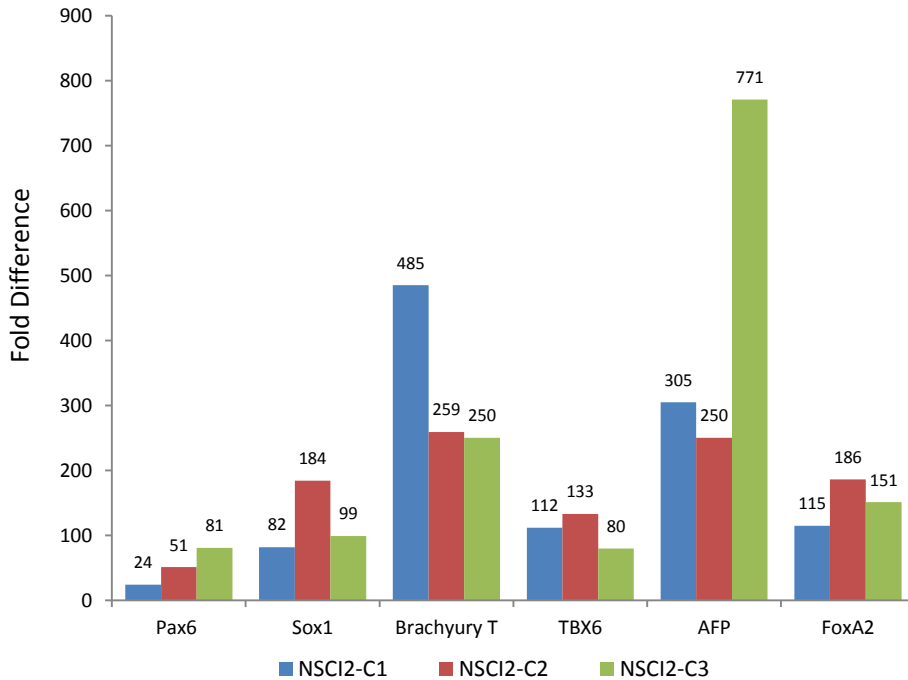


Figure: Lineage specific gene expression following EB differentiation. Fold difference is shown relative to undifferentiated iPS cell.

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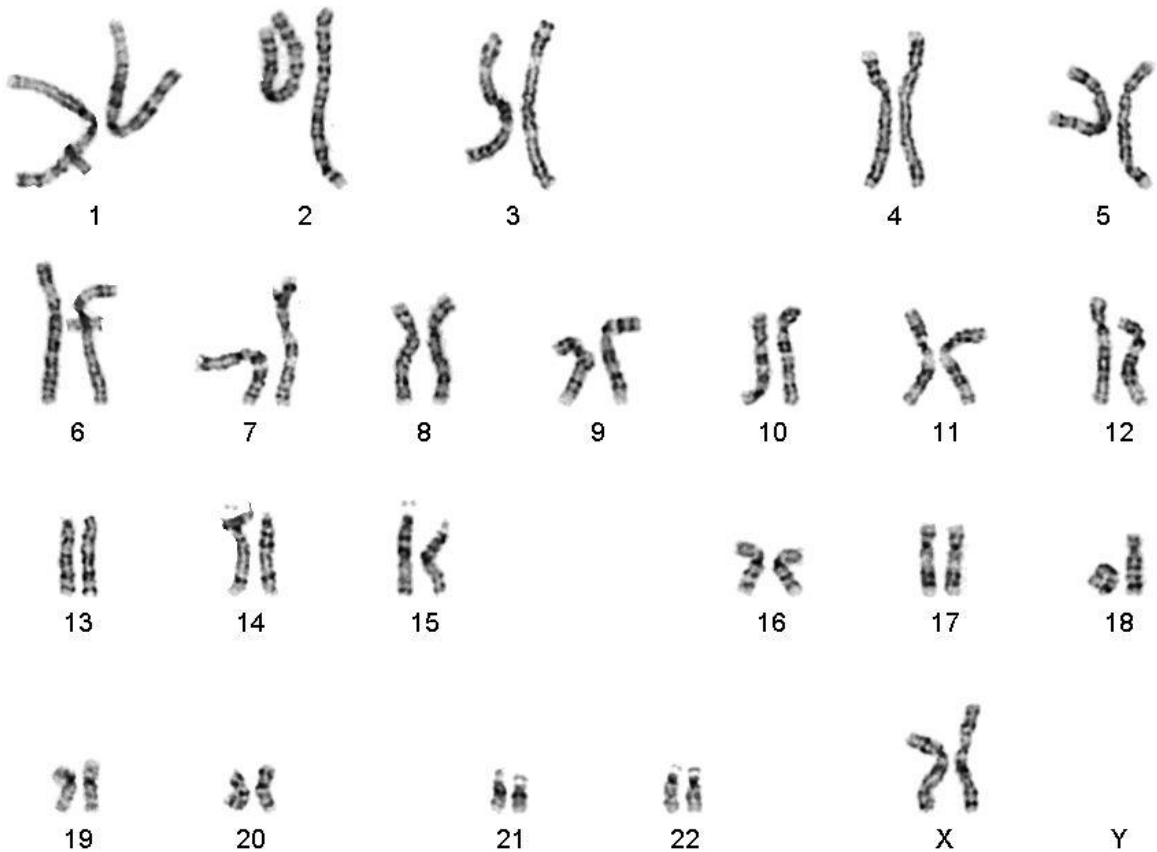
## Karyotyping

**Clone:** NSCI2 (GIH-169)-C1

**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



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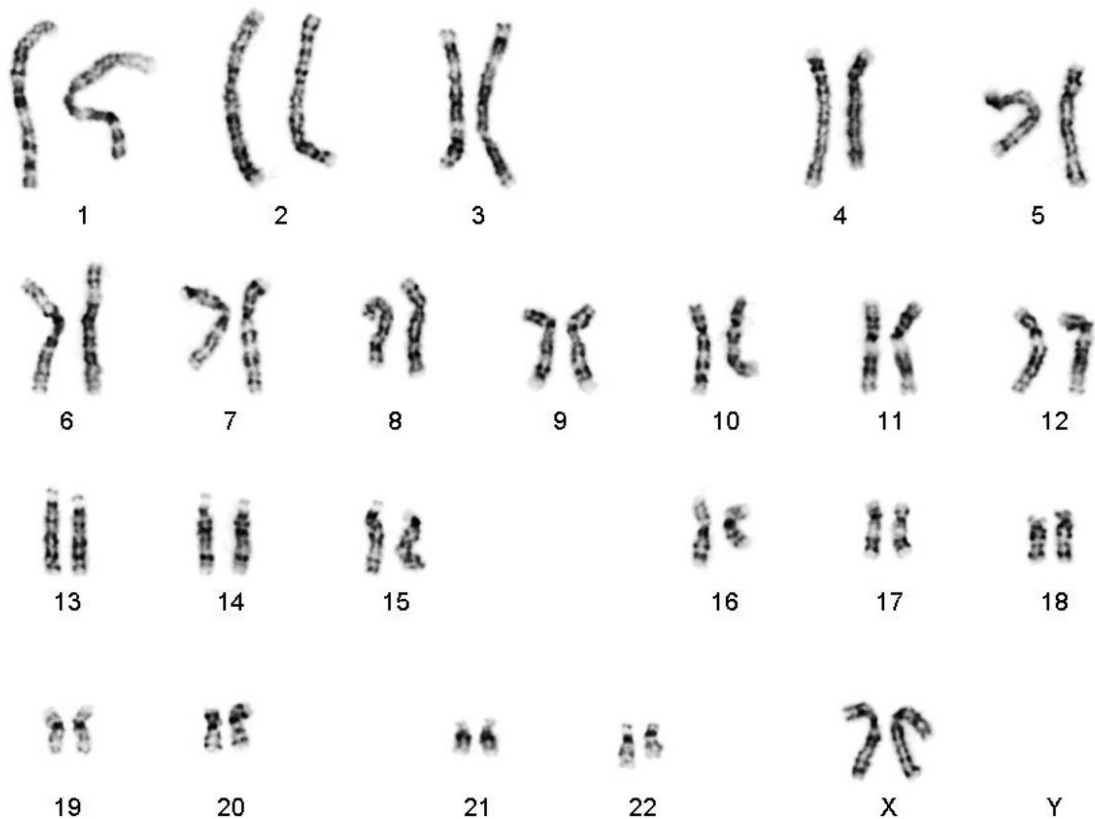
## Karyotyping

**Clone:** NSCI2 (GIH-169)-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:** NSCI2 (GIH-169)-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

