

# iPSC Characterization Report

## Information Summary

**Organization:** Neural Stem Cell Institute (NSCI)  
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**SCRC Code:** NSCI3

**Sample Name:** GIH-2

**Number of the Established iPSC Clones:** 6

**Characterization Performed:**

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

**Qualified iPSC Clones:** C1, C2, C3

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## Mycoplasma Test

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

| iPSC Clone   | NSCI3-C1 | NSCI3-C2 | NSCI3-C3 |
|--------------|----------|----------|----------|
| Cell passage | P6       | P6       | P6       |
| B/A Ratio    | 0.75     | 0.64     | 0.44     |
| Mycoplasma   | NEG      | NEG      | NEG      |
| Pass or Fail | Pass     | Pass     | Pass     |

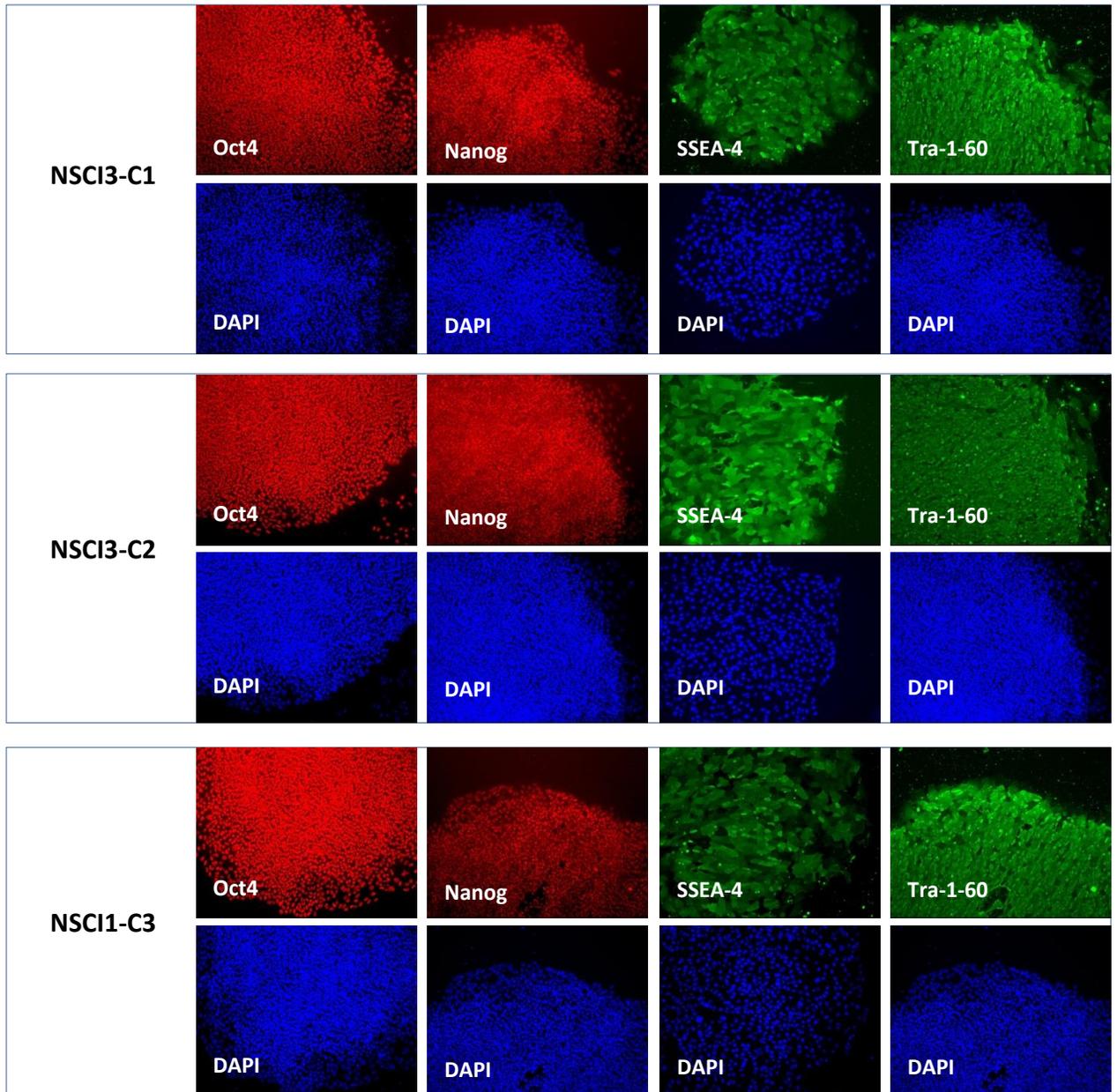
## Cell Authentication Verification

| Markers                               | NSCI3 (GIH-2) | NSCI3-C1   | NSCI3-C2   | NSCI3-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, and SSEA-4 on iPS cells



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## 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.

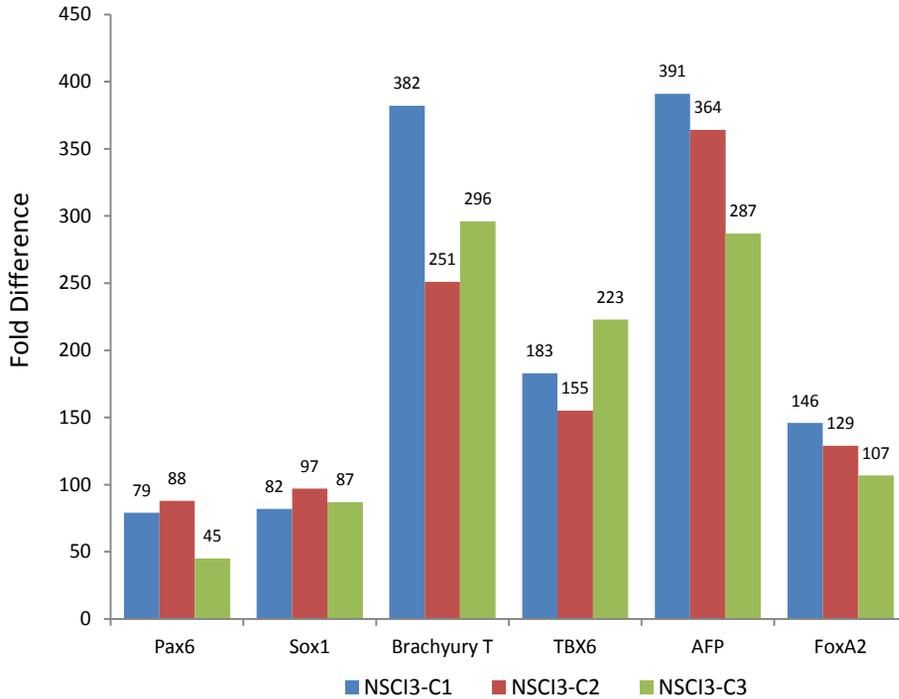


Figure: Lineage specific gene expression following EB differentiation. Fold difference is shown relative to undifferentiated iPS cell.

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## Karyotyping

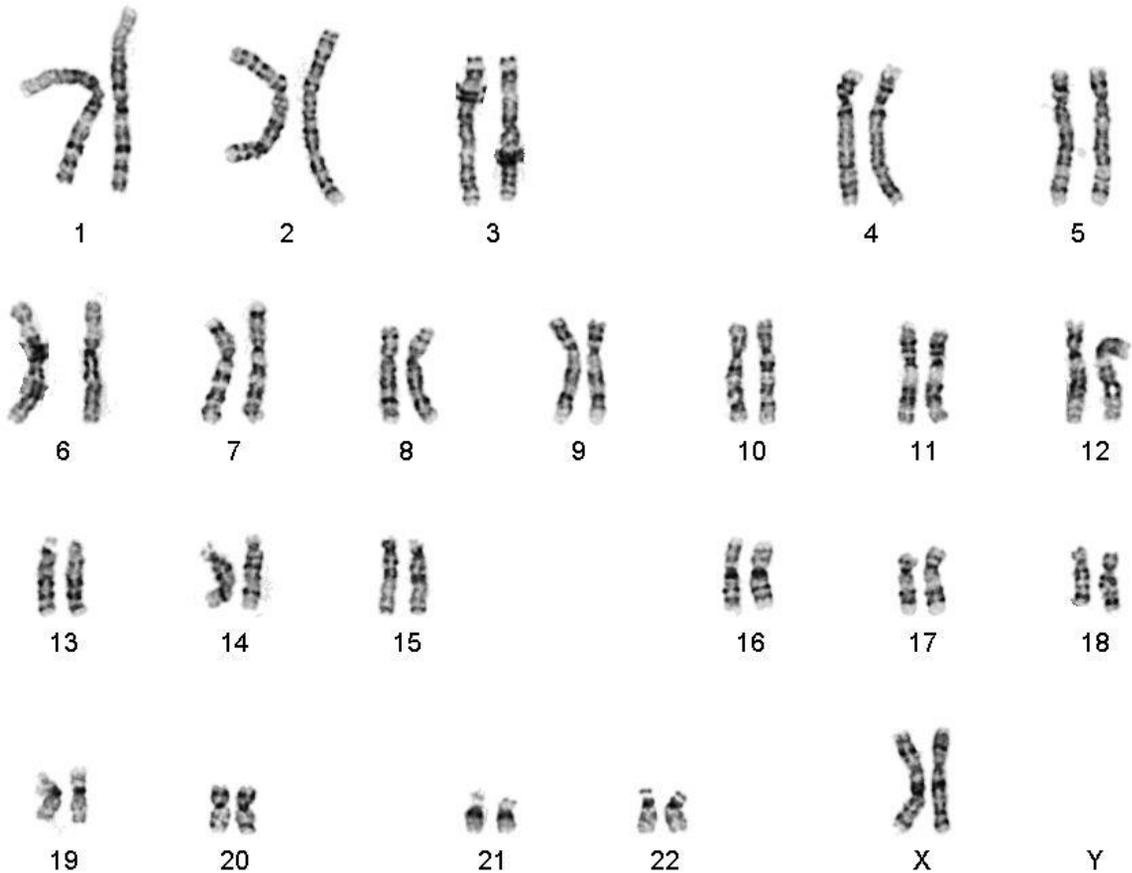
**Clone:** NSC13(GIH-2)-C1

**Passage:** P8

**Tested:** Number of metaphases counted: 20  
Number of metaphases analyzed: 6

**Banding and level:** GTG/550  
Number of karyotypes: 2

**Result:** 46,XX NORMAL FEMALE KARYOTYPE



# iPSC Characterization Report

## Karyotyping

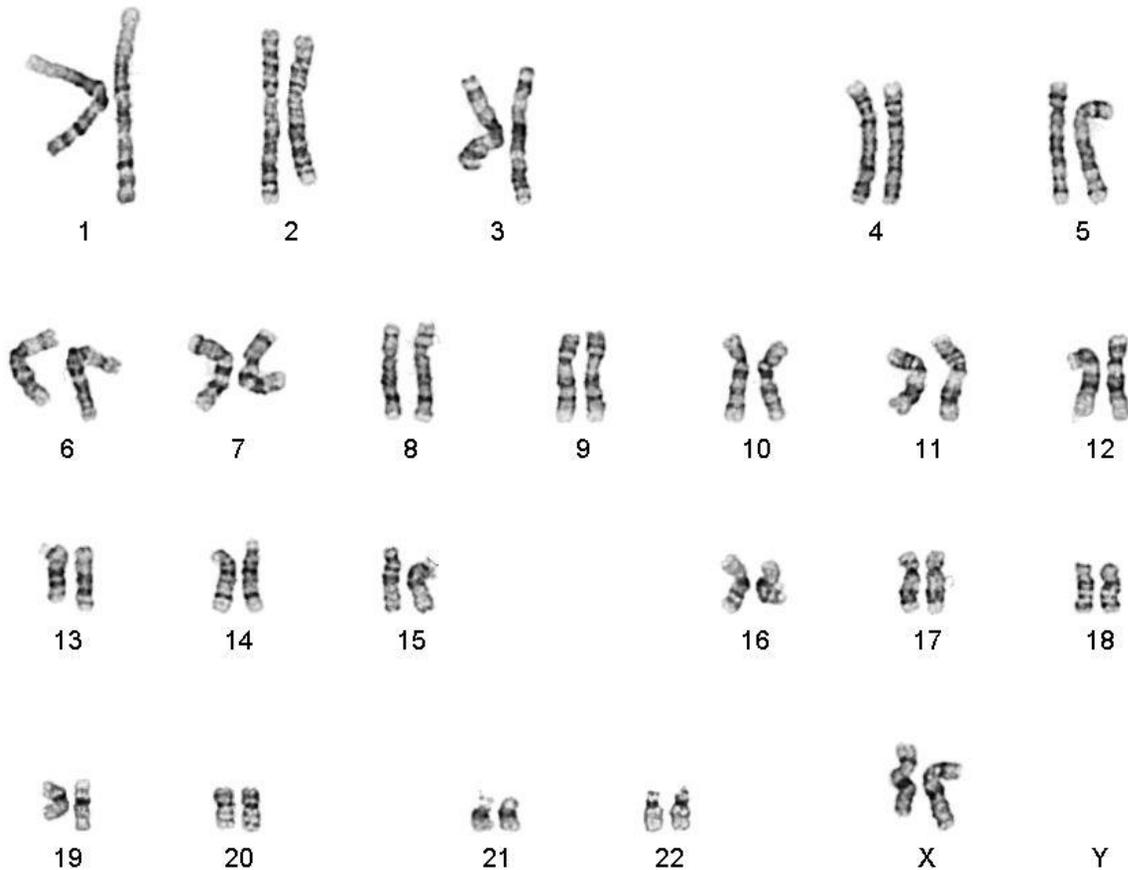
**Clone:** NSC13(GIH-2)-C2

**Passage:** P8

**Tested:** Number of metaphases counted: 20  
Number of metaphases analyzed: 6

**Banding and level:** GTG/550  
Number of karyotypes: 2

**Result:** 46,XX NORMAL FEMALE KARYOTYPE



# iPSC Characterization Report

## Karyotyping

**Clone:** NSCI3(GIH-2)-C3

**Passage:** P7

**Tested:** Number of metaphases counted: 20  
Number of metaphases analyzed: 6

**Banding and level:** GTG/450  
Number of karyotypes: 2

**Result:** 46,XX NORMAL FEMALE KARYOTYPE

