



Certificate of analysis

iPS MK082-26

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Date: 06/01/2016

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Date: 28/07/2016

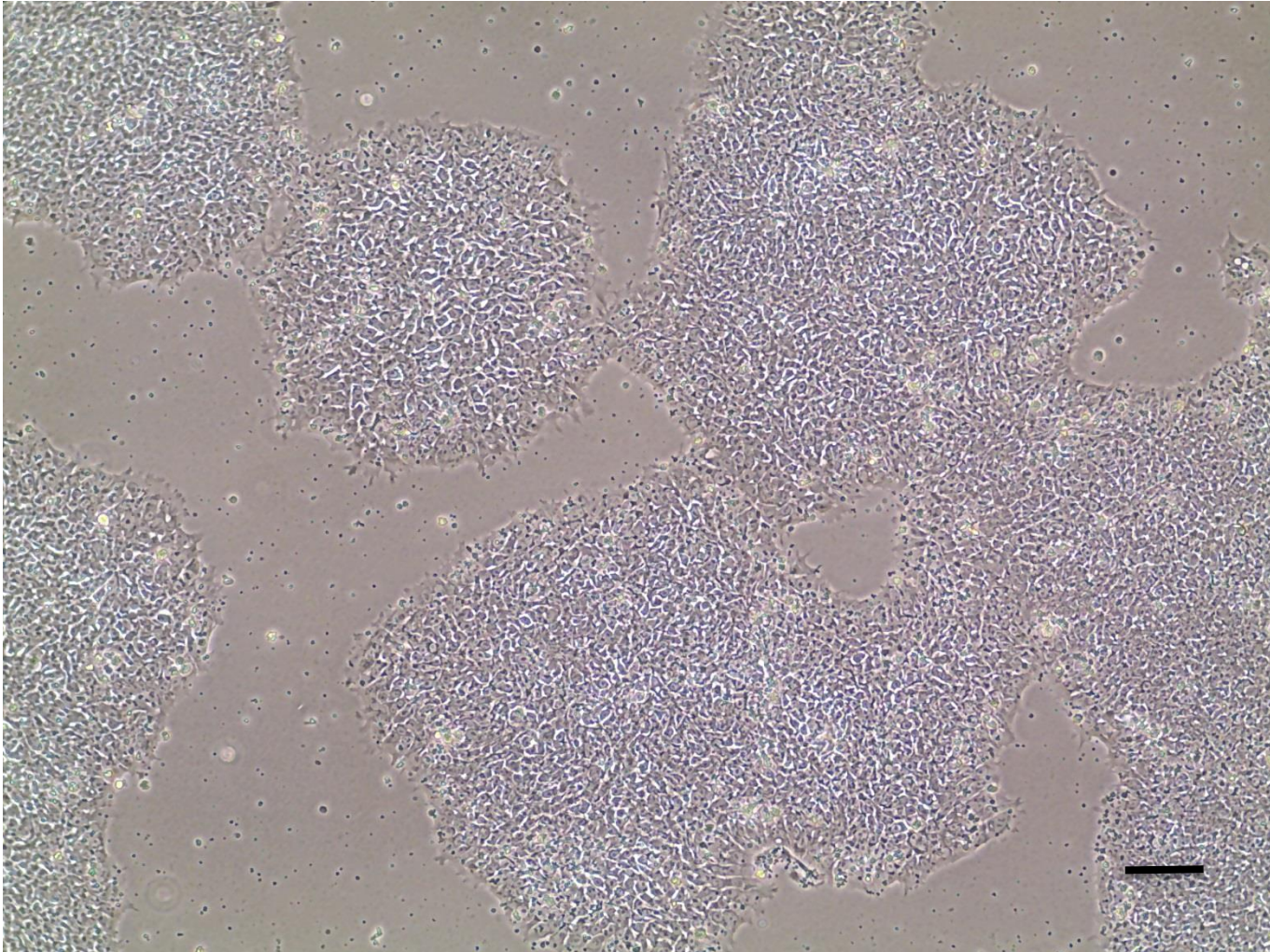
Signature: *SACowley*

Source of fibroblasts and reprogramming information

- HDF MK082 from OPDC
- Received 21/06/2011
- Male, aged 51, GBA mutation N370S
- Reprogrammed at UOXF JMSCF
- Reprogrammed on 09/01/2012 at passage 6
- Yamanaka retrovirus

Photo p22

(scale bar = 100 μ m)



Mycoplasma Test:

According to MycoAlert Lonza LT07-318 undetectable at passage 23

| Sample | Clone | Passage number | Initials | Reading 1 | Reading 2 | Ratio/Status |
|-------------|----------|----------------|----------|-----------|-----------|--------------|
| +ve control | | | | 2.343 | 156.5 | 66.79 |
| -ve control | | | | 3.27 | 0.362 | 0.11 |
| 1 | MK082-26 | p12+11 | JV | 4.166 | 2.231 | 0.54 |
| 2 | MK082-30 | p8+10 | JV | 1.332 | 0.889 | 0.67 |
| 3 | MK082-31 | p11+10 | JV | 4.847 | 2.372 | 0.49 |

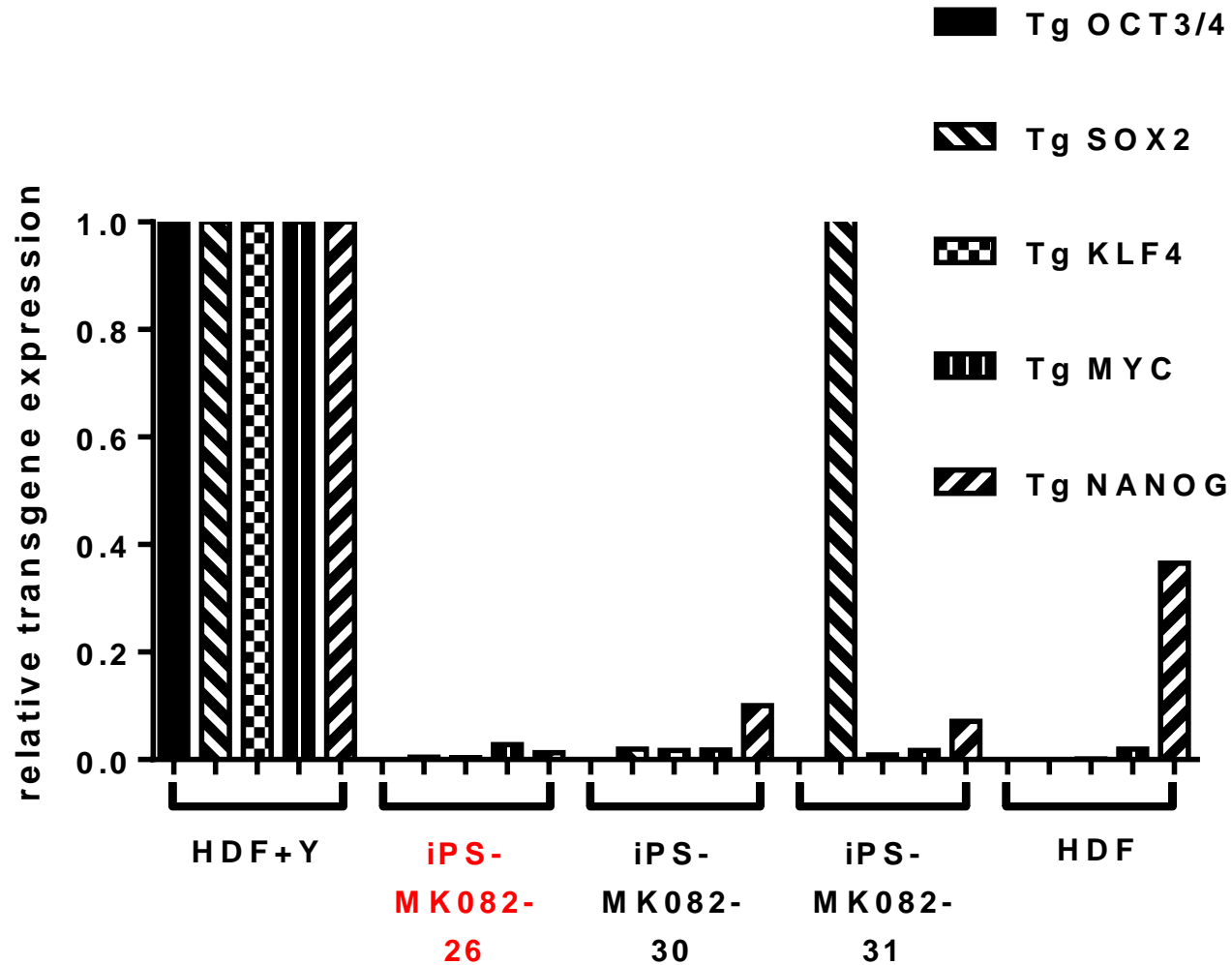
Results mean

Ratio **0 - 0.999** negative for mycoplasma

Ratio **1 – 1.3** Borderline Result (retest required)

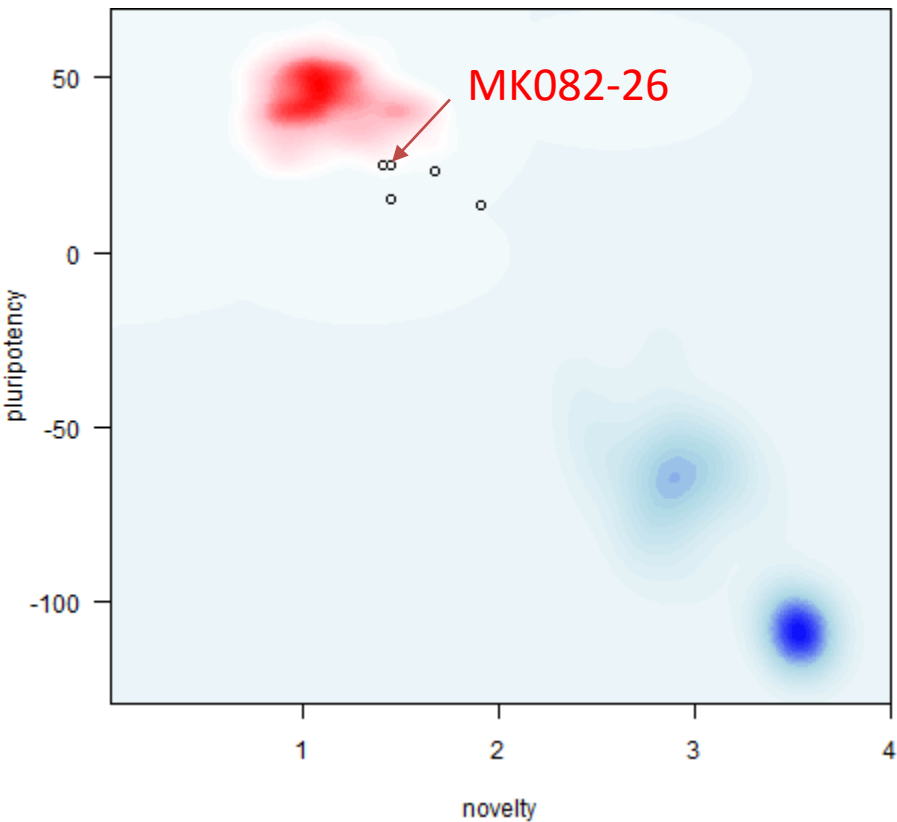
Ratio above **1.3** positive for mycoplasma

Silencing of transgenes p7



(normalised to NHDF transduced with Yamanaka reprogramming retroviruses/Nakanishi SeV 5d before harvest, 'NHDF+Y', relative to actin)

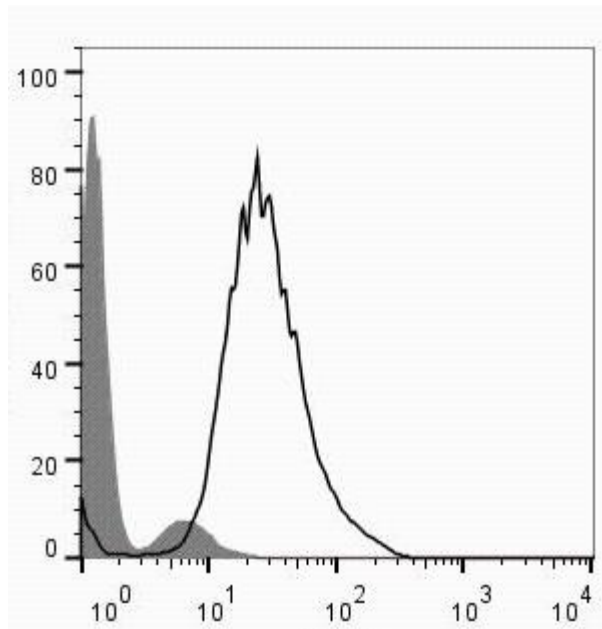
PluriTest analysis of Illumina HT12v4 transcriptome array p7



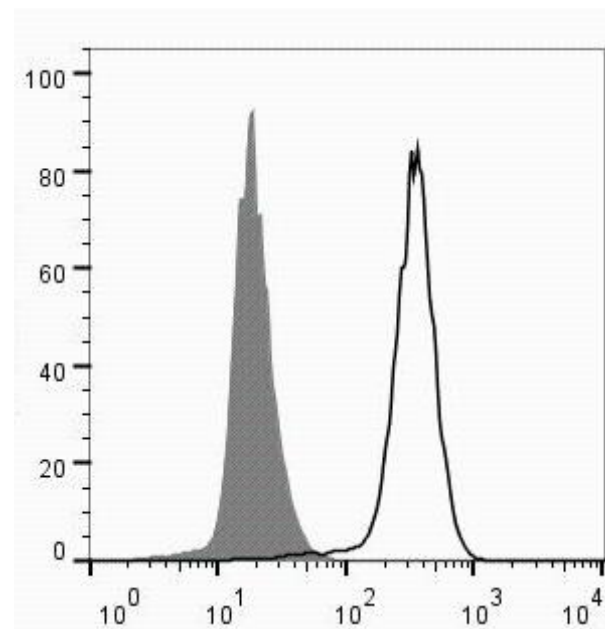
| | pluri-raw | pluri logit-p | novelty | novelty logit-p | RMSD |
|--------------|-----------|---------------|---------|-----------------|------|
| iPS.MK082.26 | 25.29 | 1 | 1.46 | 0.02 | 0.41 |
| iPS.MK082.30 | 15.37 | 1 | 1.46 | 0.02 | 0.46 |
| iPS.MK082.31 | 24.89 | 1 | 1.42 | 0.01 | 0.40 |
| iPS.MK088.1 | 23.43 | 1 | 1.67 | 0.13 | 0.50 |
| iPS.MK088.7 | 13.57 | 1 | 1.91 | 0.63 | 0.60 |

Flow cytometric analysis of pluripotency markers passage p18

Tra-1-60:



NANOG:



SNP analysis

Illumina Human CytoSNP-12v2.1 beadchip array

- Passage 13
- Identity to parent fibroblasts confirmed
- Karyotype abnormalities: none detected

