Supplementary Table 1. Primer sequences

|  |  |
| --- | --- |
| Gene | Primer sequence |
| *p53* | forward- CTGTCCCCGGACGATATTGA  reverse- CTGGCATTCTGGGAGCTTCA |
| *p21* | forward- GGCAGACCAGCATGACAGATT  reverse- ATTAGGGCTTCCTCTTGGAGAAG |
| *P16* | forward-CCCTCGTGCTGATGCTACTG reverse-CCATCATCATGACCTGGTCTTCT |
| *IL-6* | forward-TGAGGGCTCTTCGGCAAAT  reverse-CCAGAAGAAGGAATGCCCATT |
| *GAPDH* | forward- CGACCACTTTGTCAAGCTCA  reverse- AGGGGTCTACATGGCAACTG |

Supplementary Table 2. Materials

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Company | Catalog Number | Comments |
| DMEM | Invitrogen | #11960-044 |  |
| FBS | Invitrogen | #30044333 | 20%, ES cell quality |
| Penicillin and streptomycin | Invitrogen | #15140 | 50units/ml penicillin and 50mg/ml strepto  -mycin. |
| L-glutamine | Invitrogen | #25030 | 2mM |
| Nonessential amino acids (NEAA) | Invitrogen | #11140 | 100uM |
| β-mercaptoethanol | Sigma | #M3148 | 100uM |
| Leukemia inhibitory factor | Millipore | #ESG1107 | 100units/ml |
| OPTI-MEM | Invitrogen | #22600 |  |
| X-gal | Sigma | #B4252 | 1mg/ml |
| Paraformaldehyde (PFA) | Sigma | P6148 | 3.7% |
| Dimethylformamide (DMF) | Sigma | #D4551 |  |
| Potassium ferricyanide | Aldrich | #455946 | 5mM |
| potassium ferrocyanide | Aldrich | #455989 | 5mM |
| NaCl | Sigma | #S7653 | 150mM |
| MgCl2 | Sigma | #M2393 | 2mM |
| Mytomycin C | Sigma | #M4287 | 10ug/ml |
| Propidium iodide | Sigma | #P4170 | 50ug/ml |
| TRIzol | Ambion | #15596018 |  |
| M-MLV reverse transcript-tase | Promega | #M170B |  |
| Power SYBR Green PCR master mix | Applied Biosystems | #4367659 |  |
| HDFs, NHDF-Ad-Der-Fibroblast | LONZA | #CC-2511 |  |
| Bottle top filter, | Corning | #430513 | 0.2μm |