Supplementary Table 1. Primers used for qPCR analysis

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| --- | --- | --- | --- |
| Gene | Accession No. | Sequence | Product length (bp) |
| *Bax* | [NM\_](https://www.ncbi.nlm.nih.gov/nuccore/NM_001159696.1)007527.3 | F: 5’- CATCTTTGTGGCTGGAGTCCTC -3’  R: 5’- AAGTGGACCTGAGGTTTATTGGC -3’ | 216 |
| *Caspase3* | NM\_ 001284409.1 | F: 5’- GTTCATCCAGTCCCTTTGCAG -3’  R: 5’- GTACAGTTCTTTCGTGAGCATGG -3’ | 181 |
| *Gapdh* | NM\_008084 | F: 5’-GTCGTGGAGTCTACTGGTGTC-3’  R: 5’-GAGCCCTTCCACAATGCCAAA-3’ | 240 |

Supplementary Table 2. Effect of different culture systems on development of zona free mouse embryos

|  |  |  |  |
| --- | --- | --- | --- |
| Culture system | No. of replication | Total No. of embryos cultured  (Started from 2-cell) | No. of Blastocyst developed (Mean ± S. E. M.) |
| Microdroplet | 4 | 85 | 31 (36.5 ± 1.4a) |
| WOW | 4 | 70 | 41 (59.0 ± 2.5b) |
| Customized WOW | 4 | 88 | 61 (69.3 ± 0.79c) |