|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment** | **Genotype** | **Animal Code** | **Complete Genotype** |
| Percentage of H1t-positive spermatocytes (Fig 1B) | Wild type | 2 | *Trip13+/+* |
| 4 | *Trip13+/+* |
| 5 | *Trip13+/+* |
| 6 |  *Trip13+/+ p53+/+* |
| Trip13  | 1 | *Trip13mod/mod* |
| 5 | *Trip13mod/mod* |
| 6 | *Trip13mod/mod* |
| 7 | *Trip13mod/mod p53+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 3 | *Trip13mod/mod p53-/-* |
| 4 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| 4 | *Trip13mod/mod TAp63-/-* |
| Trip13 p73 | 1 | *Trip13mod/mod p73-/-* |
| 2 | *Trip13mod/mod p73-/-* |
| Number of gH2AX patches per spermatocyte (Fig 1C-K) | Wild type | 1 |  *Trip13+/+ p53+/+* |
| 2 | *Trip13+/+* |
| 3 | *Trip13+/+* |
| Trip13  | 1 | *Trip13mod/mod p53+/+* |
| 2 | *Trip13mod/mod p53+/+* |
| 3 | *Trip13mod/mod TAp63+/+* |
| 4 | *Trip13mod/mod TAp63+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 3 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 1 | *Trip13mod/mod TAp63-/-* |
| 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| Trip13 p73 | 1 | *Trip13mod/mod p73-/-* |
| 2 | *Trip13mod/mod p73-/-* |
| Percentage of apoptotic spermatocytes (Fig 2) | Trip13  | 1 | *Trip13mod/mod p53+/+* |
| 2 | *Trip13mod/mod p53+/+* |
| 3 | *Trip13mod/mod TAp63+/+* |
| 4 | *Trip13mod/mod TAp63+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 3 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 1 | *Trip13mod/mod TAp63-/-* |
| 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| Trip13 p73 | 1 | *Trip13mod/mod p73-/-* |
| 2 | *Trip13mod/mod p73-/-* |
| Apoptotic cells per tubule (Fig 3A-D) | wild type | 7 | *Trip13+/+ p53+/+* |
| 8 | *Trip13+/+ p53+/+* |
| 9 | *Trip13+/+ p53+/+* |
| Trip13 | 1 | *Trip13mod/mod p53+/+* |
| 8 | *Trip13mod/mod*  |
| 9 | *Trip13mod/mod p53+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 4 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| 4 | *Trip13mod/mod TAp63-/-* |
| Histology (Fig 3E-I and Fig 5) | Wild type | 10 | Trip13+/+ TAp63+/+ |
| 13 |  Trip13+/+ p53+/+ |
| 17 |  Trip13+/+ p53+/+ |
| Trip13 | 9 | Trip13mod/mod p53+/+ |
| 10 | Trip13mod/mod p53+/+ |
| 13 | Trip13mod/mod p53+/+ |
| Trip13 p53 | 1 | Trip13mod/mod p53-/- |
| 2 | Trip13mod/mod p53-/- |
| Trip13 TAp63 | 2 | Trip13mod/mod TAp63-/- |
| 4 | Trip13mod/mod TAp63-/- |
| Trip13 p73 | 1 | Trip13mod/mod p73-/- |
| Spo11 | 1 | Spo11-/- |
| 4 | Spo11-/- |
| Spo11 p53 | 1 | Spo11-/- p53-/- |
| 2 | Spo11-/- p53-/- |
| ATR, SUMO1 staining (Fig 4D-I and Sup Fig 5) | Wild type | 2 | *Trip13+/+* |
| 9 |  *Trip13+/+ p53+/+* |
| 11 | *Trip13+/+* |
| 12 |  *Trip13+/+ p53+/+* |
| Trip13  | 1 | *Trip13mod/mod p53+/+* |
| 2 | *Trip13mod/mod p53+/+* |
| 3 | *Trip13mod/mod TAp63+/+* |
| 4 | *Trip13mod/mod TAp63+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 3 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 1 | *Trip13mod/mod TAp63-/-* |
| 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| gH2AX sex body staining (Fig 4A-C and Sup Fig 5) | Wild type | 1 |  *Trip13+/+ p53+/+* |
| 2 | *Trip13+/+* |
| 3 | *Trip13+/+* |
| Trip13  | 2 | *Trip13mod/mod p53+/+* |
| 3 | *Trip13mod/mod TAp63+/+* |
| 4 | *Trip13mod/mod TAp63+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| 3 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 1 | *Trip13mod/mod TAp63-/-* |
| 2 | *Trip13mod/mod TAp63-/-* |
| 3 | *Trip13mod/mod TAp63-/-* |
| RAD51 counts (Sup Fig 3) | Wild type | 1 |  *Trip13+/+ p53+/+* |
| 13 |  *Trip13+/+ p53+/+* |
| Trip13 | 2 | *Trip13mod/mod p53+/+* |
| 9 | *Trip13mod/mod p53+/+* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| 2 | *Trip13mod/mod p53-/-* |
| Spo11 p53 cytology (Fig 5) | Spo11 | 2 | *Spo11-/-* |
| 3 | *Spo11-/-* |
| Spo11 p53 | 1 | *Spo11-/- p53-/-* |
| 2 | *Spo11-/- p53-/-* |
| RNA FISH (Fig 4J-K and Sup Fig 5) | Wild type | 14 | *Trip13+/+* |
| 15 | *Trip13+/+* |
| 16 |  *Trip13+/+ p53+/+* |
| Trip13 | 11 | *Trip13mod/mod p53+/+* |
| 12 | *Trip13mod/mod p53+/-* |
| Trip13 p53 | 1 | *Trip13mod/mod p53-/-* |
| Trip13 TAp63 | 1 | *Trip13mod/mod TAp63-/-* |
| 4 | *Trip13mod/mod TAp63-/-* |
| p63 staining | Wild type | 17 |  *Trip13+/+ p53+/+* |
| 13 |  *Trip13+/+ p53+/+* |
| Trip13 | 9 | *Trip13mod/mod p53+/+* |
| 13 | *Trip13mod/mod p53+/+* |
| Trip13 p53 | 2 | *Trip13mod/mod p53-/-* |
| 1 | *Trip13mod/mod p53-/-* |
| p53 staining | Wild type | 17 |  *Trip13+/+ p53+/+* |
| 13 |  *Trip13+/+ p53+/+* |
| Trip13 | 9 | *Trip13mod/mod p53+/+* |
| 13 | *Trip13mod/mod p53+/+* |
| Trip13 TAp63 | 2 | *Trip13mod/mod TAp63-/-* |
| 4 | *Trip13mod/mod TAp63-/-* |