**S1 Table**

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| **Boundary****Data****TAD calling w** | ***Atf2*** | ***HoxD*** | **CS38-40** | ***Hnrnpa3*** | **Left\_Bd** | **Integration** | **Right\_Bd** |
| **Wt\_map\_mm10****240kb** | YES | YES | YES | YES | YES | NO | YES |
| **Wt\_map\_mm10****320kb** | YES | YES | NO | YES | YES | NO | YES |
| **Wt\_map\_mm10****480kb** | NO | YES | NO | YES | YES | NO | YES |
| **Wt\_map\_mm10****800kb** | NO | YES | NO | NO | YES | NO | YES |
| **Wt\_map\_Tg+del****240kb** | YES | YES | NO | YES | YES | NO | YES |
| **Wt\_map\_Tg+del****320kb** | YES | YES | NO | YES | YES | NO | YES |
| **Wt\_map\_Tg+del****480kb** | NO | YES | NO | YES | YES | NO | YES |
| **Wt\_map\_Tg+del****800kb** | NO | YES | NO | NO | YES | NO | YES |
| **Tg+del\_map\_mm10****240kb** | YES | YES | NO | YES | YES | YES | YES |
| **Tg+del\_map\_mm10****320kb** | YES | YES | NO | YES | YES | YES | NO |
| **Tg+del\_map\_mm10****480kb** | NO | YES | NO | YES | YES | YES | NO |
| **Tg+del\_map\_mm10****800kb** | NO | YES | NO | NO | YES | NO | YES |
| **Tg+del\_map\_Tg+del****240kb** | YES | YES | NO | YES | YES | YES | YES  |
| **Tg+del\_map\_Tg+del****320kb** | YES | YES | NO | YES | YES | YES | NO |
| **Tg+del\_map\_Tg+del****480kb** | NO | YES | NO | YES | YES | NO | YES |
| **Tg+del\_map\_Tg+del****800kb** | NO | YES | NO | NO | YES | NO | YES |

**S1 Table.** Identification of topological boundaries using various window sizes. Source data (for different genotypes and mapped genomes) and TAD calling window sizes (w) are indicated. At the *HoxD* locus, *Atf2* is the left boundary of the C-DOM and *Hnrnpa3* is the right boundary of the T-DOM. Left\_Bd and Right\_Bd are respectively the left and right boundaries of the TAD hosting the TgN(38-40) construct in chromosome 10 (see Figs 3B and 4A).

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