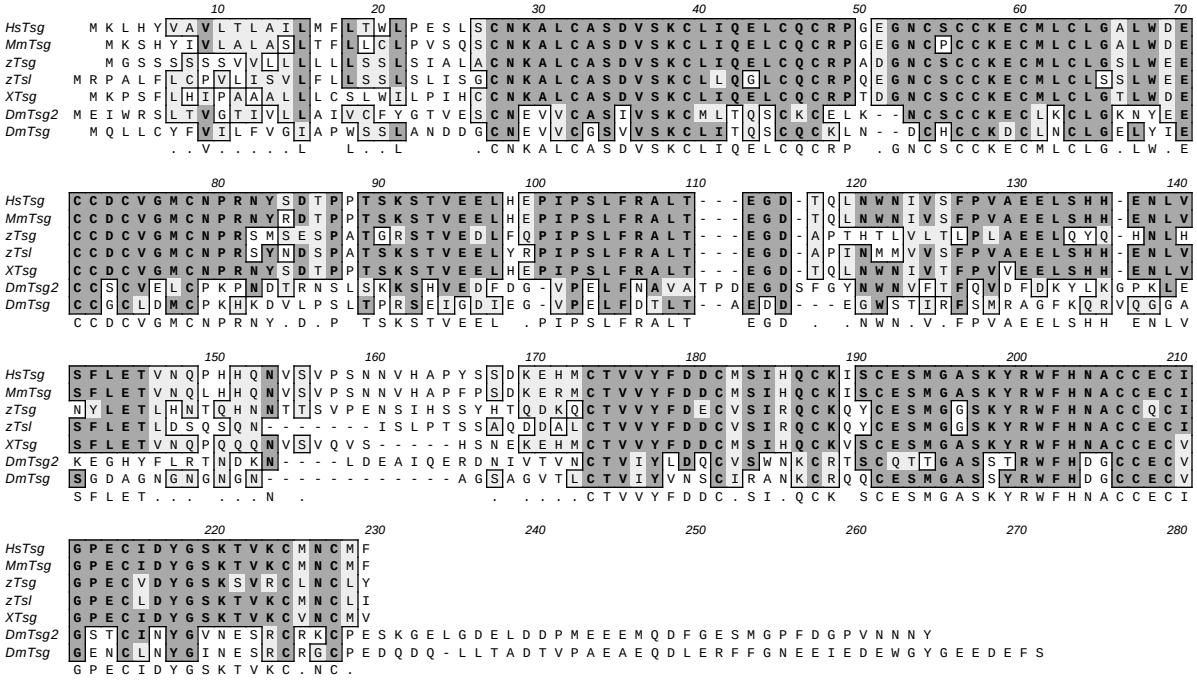
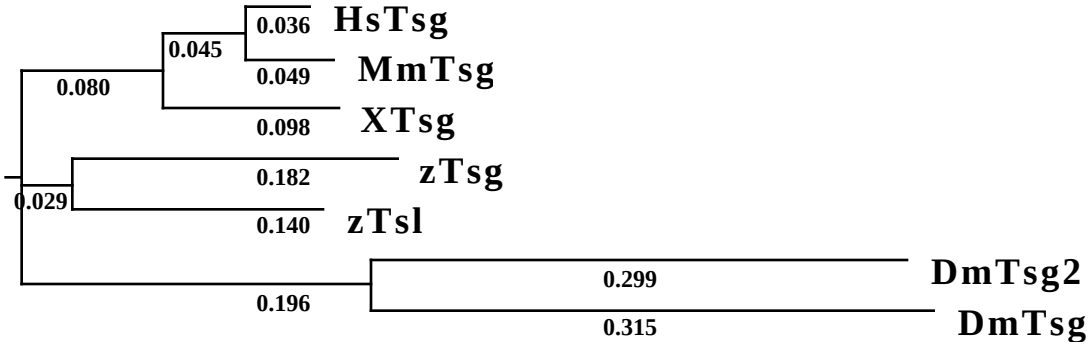
A


HsTsg
MmTsg
zTsg
zTsl
XTsg
DmTsg2
DmTsg

B


0.036
HsTsg
0.045
0.049
MmTsg
0.080
0.098
XTsg
0.182
zTsg
0.029
0.140
zTsl
0.299
DmTsg2
0.196
0.315
DmTsg

Legend: (A) Alignment of Tsg proteins. Human = Hs*TSG*; mouse = Mm*Tsg*, zebrafish = z*tsg* and zTsl, Xenopus laevis = XTsg AF245221, *Drosophila melanogaster* = DmTsg U09808 and DmTsg2. Proteins are aligned using clustal in MacVector6.5. Identical amino acids are shaded dark and similarities shaded lightly. Gaps are represented by a dash(-). A consensus sequence is listed below the alignment where more that 51% of the genes matched. The early embryonic genes of fish and fly are zTsg and DmTsg. (B) A dendrogram showing the relationship between the proteins with the number of changes per residue indicated.

Sequence and mapping:

Human clones were obtained from Research Genetics were AI018381, AI379897, AA758784, AA905905. Clone AI018381 was sequenced in its entirety and lacked the 5' 120 bp. The sequence of this region was obtained from published Est sequences that were not physically available AW160804, AW068102 and by comapring these to the genomic sequence of the *tsg* region. The human *TSG* locus was mapped against the Stanford G3 hamster-human radiation hybrid panel using primer pairs at the beginning middle and end of the *TSG* mRNA. This placed *HsTSG* between STS markers D18 and D18 within cytogenetic band 18p11.22.

The zebra fish (Danio rerio) *tsg* gene maps to Dre linkage group 24 at 74.5. Two other loci map close to this in the fish that are also found at 18p11 in humans, namely a receptor protein tyrosine phosphatase NP_002836 also at 24_74.5 and a Dre Est fa06h05, homologous to human TGIF at 24_35.8. Thus, the human and fish gene regions are syntenic.