



Dot plot of the genomic region containing *KALP* and *VCY* (horizontal axis) versus the syntenic region on the X chromosome (containing *KAL1* and *VCX*; vertical axis).

Within the plot, each dot represents 30 bp of complete identity. Overall sequence similarity between the 5' ends of *KALP* and *KAL1* (lower left region of the plot) is lower than the similarity between the 3' ends of these genes and between *VCY* and *VCX* (upper right region of the plot). This difference is reflected in *Ks* values for *KALP* and *KAL1*; for exons 1 through 9, $Ks = 0.11 \pm 0.03$, whereas for exons 10 through 14, $Ks = 0.03 \pm 0.02$. The differences in overall sequence similarity and in *Ks* are highly significant, and can be explained either by different ages of divergence between Y and X sequences in the two regions, or by relatively recent gene conversion (~7 million years ago) between *KALP* and *KALY* in the region 3' of exon 9 and possibly extending through *VCY* and *VCX*.