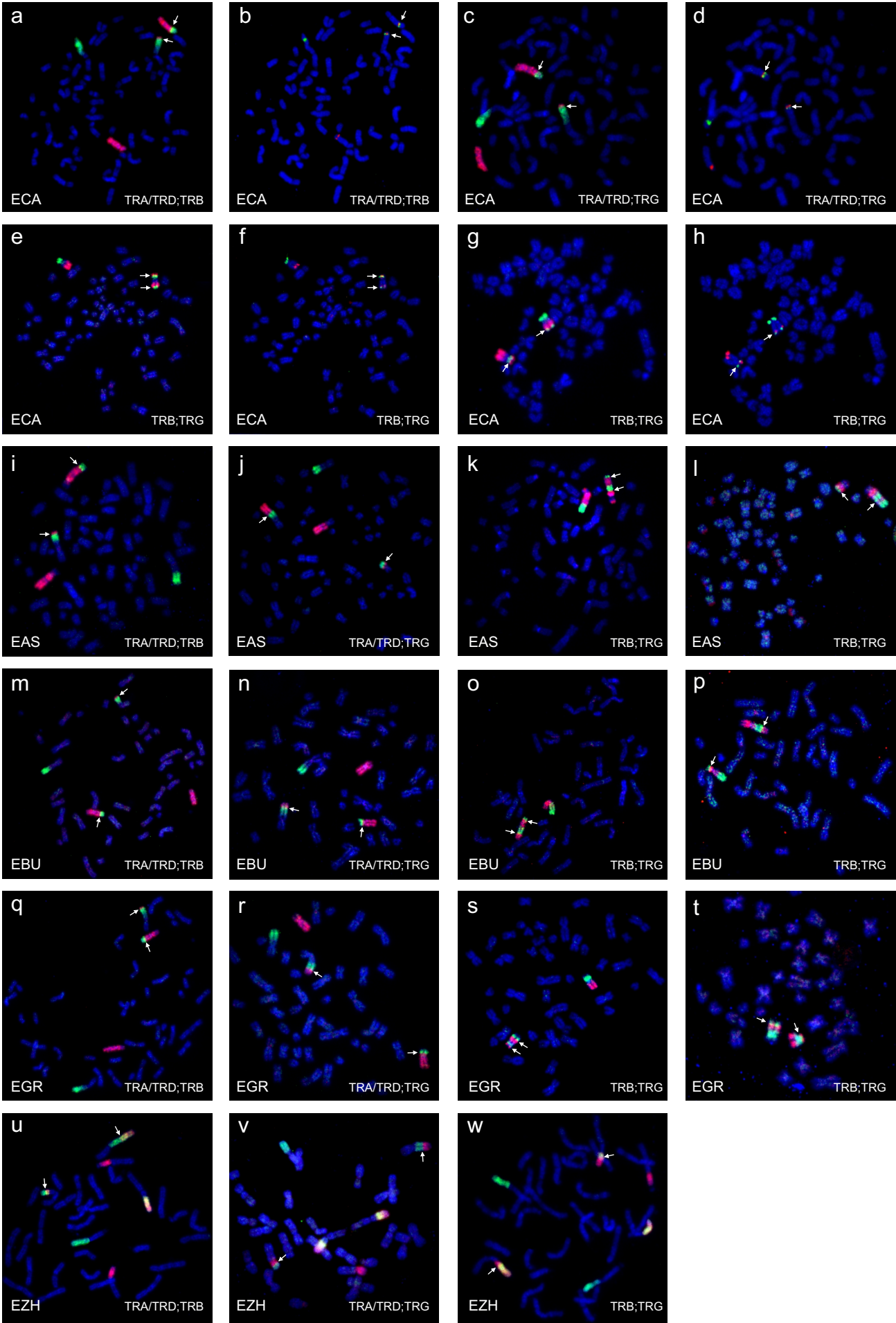


Supplementary Figure 1



Supplementary Figure 1. Chromosome rearrangements with breakpoints in TCR genes detected by FISH in horse (ECA), donkey (EAS), Burchell's zebra, Grevy's zebra (EGR) and Hartmann's zebra (EZH). Horse metaphase cells with translocation with breakpoints in *TRA/TRD* and *TRB* hybridized with a) painting probes for chromosomes 1q (green) and 4 (red) and b) dual fusion BAC probes flanking the *TRA/TRD* locus (green) and *TRB* locus (red). Horse metaphase cells with translocation with breakpoints in *TRA/TRD* and *TRG* hybridized with c) painting probes for chromosomes 1q (green) and 4 (red) and d) dual fusion BAC probes flanking the *TRA/TRD* locus (green) and *TRG* locus (red). Horse metaphase cells with pericentric inversion with breakpoints in *TRB* and *TRG* hybridized with e) painting probes for chromosome 4p (green) and 4q (red) and f) dual fusion BAC probes flanking the *TRB* locus (red) and *TRG* locus (green). Horse metaphase cells with translocation between homologous chromosomes with breakpoints in *TRB* and *TRG* hybridized with g) painting probes for chromosome 4p (green) and 4q (red) and h) dual fusion BAC probes flanking the *TRB* locus (red) and *TRG* locus (green). Donkey metaphase cells with translocations i) with breakpoints in *TRA/TRD* and *TRB* and j) with breakpoints in *TRA/TRD* and *TRG* hybridized with painting probes for horse chromosomes 1q (green) and 4 (red). Donkey metaphase cells with k) paracentric inversion and l) translocation between homologous chromosomes with breakpoints in *TRB* and *TRG* hybridized with painting probes for horse chromosome 4p (red) and 4q (green). Burchell's zebra metaphase cells with translocations m) with breakpoints in *TRA/TRD* and *TRB* and n) with breakpoints in *TRA/TRD* and *TRG* hybridized with painting probes for horse chromosomes 1q (green) and 4 (red). Burchell's zebra metaphase cells with o) pericentric inversion and p) translocation between homologous chromosomes with breakpoints in *TRB* and *TRG* hybridized

with painting probes for horse chromosome 4p (red) and 4q (green). Grevy's zebra metaphase cells with translocations q) with breakpoints in *TRA/TRD* and *TRB* and r) with breakpoints in *TRA/TRD* and *TRG* hybridized with painting probes for horse chromosomes 1q (green) and 4 (red). Grevy's zebra metaphase cells with s) pericentric inversion and t) translocation between homologous chromosomes with breakpoints in *TRB* and *TRG* hybridized with painting probes for horse chromosome 4p (green) and 4q (red). Hartmann's zebra metaphase cells with translocations u) with breakpoints in *TRA/TRD* and *TRB*, v) with breakpoints in *TRA/TRD* and *TRG* and w) in *TRB* and *TRG* hybridized with painting probes for horse chromosomes 1q (green), 4p (red) and 4q (yellow+red). Arrows show breakpoints in rearranged chromosomes.