

**Fig. 1: Diagrammatic representation showing the location of the MHC genes on chromosome 6.**

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Fig.2: Complete gene map of the MHC reference sequence. A complete picture of all the genes now annotated for the MHC is provided at <http://www.nature.com/nrg/journal/v5/n12/poster/MHCmap>

Father--------------------------------Mother

**a b c d**

A1 A3 A2 A29

B8 B7 B44 B44

DR17 DR15 DR4 DR7

Child 1 Child 2 Child 3 Child 4

**a c a d b c b d**

A1 A2 A1 A29 A3 A2 A3 A29

B8 B44 B8 B44 B7 B44 B7 B44

DR17 DR4 DR17 DR7 DR15 DR4 DR15 DR7

**Fig. 3: Mendelian inheritance of MHC haplotypes demonstrated in a family study. MHC haplotypes and genotypes can be inferred from phenotype data in an informative family study as illustrated. E.g. The father’s phenotype is HLA-A1, 3; B7, 8 and DR15, 17. From the family study, his genotype is A1, B8, DR17** (a) **and A3, B7, DR15** (b) **and the maternal HLA haplotypes are A2, B44, DR4** (c) **and A29, B44, DR7** (d)**.**