BACKGROUND

Major histocompatibility complex (MHC) molecules form an integral part of the immune response system. They are cell-surface receptors that bind foreign peptides and present them to cytotoxic T lymphocytes (CTLs). MHC class I molecules consist of two polypeptide chains, an α or heavy chain and a non-covalently associated protein, β-2-Microglobulin. MHC class II molecules consist of a non-covalent complex of an α and β chain and are involved in antigen presentation by antigen presenting cells (APCs) to CD4+ T cells. They are expressed on APCs including B cells, macrophages, monocytes and dendritic cells, and are inducible by interferon-γ on a number of other cells, such as endothelium and epithelial cells. The mouse H2-Ab locus is orthologous to human DQB, which varies from typical class II genes in that both the α and β chains are polymorphic. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: H2-Ab1 (mouse) mapping to 17 B1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.