


## MHC class I <br> MHC class II



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| Bacterium infects macrophage |
| :--- |
| and enters vesicle, |
| producing peptide fragments |

Bacterial fragments bound by MHC class II in vesicles

Bound peptides transported by MHC class II to the cell surface



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Figure 4-1 T cell recognition of a peptide-MHC comple

## Cytotoxic T cell recognizes complex of viral peptide with MHC class I and kills infected cell




Helper T cell recognizes complex of antigenic peptide with MHC class II and activates B cell


Figure 1-31 Immunobiology, 6/e. (© Garland Science 2005)

## $\mathrm{T}_{H} 1$ cell recognizes complex of bacterial peptide with MHC class II and activates macrophage



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## Helper T cell recognizes complex of antigenic peptide with MHC class II and activates B cell



Figure 1-31 part 2 of 2 Immunobiology, 6/e. ( $\odot$ Garland Science 2005)



Figure 4-2 MHC genes control graft rejection and antibody responses.
The two strains of mice shown are identical except for their MHC alleles (a and b). These strains reject skin grafts from each other (A) and respond differently to immunization with a model protein antigen (usually a simple polypeptide) (B). MHC, major histocompatibility complex.

