

## **Keywords and Phrases for MHC Molecules.**

all nucleated cells in the body

antigen-presenting cells or APCs

antigens that enter from outside the body

Cytoplasmic viral, bacterial, or tumor proteins are degraded into peptide epitopes by organelles called proteasomes and attached to MHC-I molecules.

enable T4-lymphocytes to recognize epitopes of antigens

enable T8-lymphocytes to recognize epitopes of antigens; enable the body to recognize infected cells and tumor cells and destroy them with cytotoxic T-lymphocytes (CTLs)

MHC-I/peptide complexes to a complementary-shaped TCR/CD8 on the surface of naive T8-lymphocytes and cytotoxic T-lymphocytes

MHC-II/peptide complexes to a complementary-shaped TCR/CD8 on the surface of naive T4-lymphocytes or effector T4-lymphocytes

Microbes are engulfed and placed in a phagosome and degraded by lysosomes. Proteases degrade microbial proteins into peptides that are then attached to MHC-II molecules.

peptide epitopes from endogenous antigens

peptide epitopes, typically 10-30 amino acids, long from exogenous antigens

proteins found within the cytosol of human cells