

Adaptive Immunity

Essential Information

Most Important Immune Cells of Adaptive Immunity

cytotoxic-T cells (c-T-c)

helper-T-cells (h-T-c)

B-cells

These Immune cells have receptors

c-T-c have receptors able to bind to MHCP-I

h-T-c have receptors able to bind to MHCP-II

B-cells use D antibodies as receptors / with MHCP-II

Infected host cells also use MHCP-I to display the bacteria's epitope on the outer surface of their plasma membrane.

This means that after a c-T-c is activate, then the c-T-c may use its receptor to dock to an infected host cell's MHCP-I-epitope complex and kill the infected host cell with a kiss of death.

Antigen presenting cells

Macrophage

Dendritic cells

B-cells

APC use MHCP to display bacterial epitope

Macrophage use MHCP-II

Dendritic cells use MHCP-I and MHCP-II

B-cells use MHCP-II

Because dendritic cells have MHCP-I and MHCP-II, dendritic cells may dock to both n-i-c-T-c and n-i-h-T-c in order to activate these cells.

Macrophage display epitope with MHCP-II so they may only activate n-i-h-T-c.

Note: Host cells also use MHCP-I. So after c-T-c are activated they may dock with infected host cells to deliver the kiss of death.