After an antigen

Activation of T Cells: Helper and Cytotoxic

After an antigen-presenting cell such as a macrophage has ingested and processed an antigen, it presents the antigen fragment, along with a class II marker protein, to a matching helper T cell with a T4 receptor.

The binding prompts the macrophage to release interleukins that allow the T cell to mature.

A cytotoxic T cell recognizes antigens such as virus proteins, which are produced within a cell, in combination with a class I self-marker protein. With the cooperation of a helper T cell, the cytotoxic T cell matures. Then, when the mature cytotoxic T cell encounters its specific target antigen combined with a class I marker protein—for instance, on a body cell that has been infected with a virus—it is ready to attack and kill the target cell.