

# Antigen-presenting cells

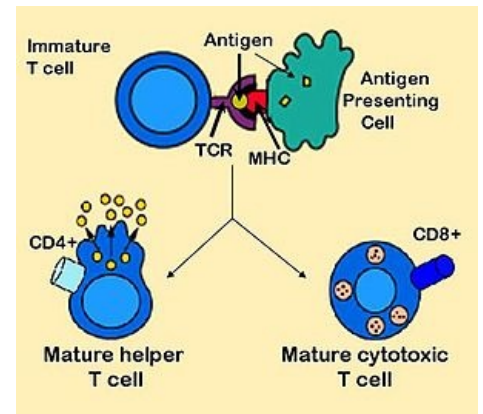
**Antigen-presenting cells** (APCs) are primarily phagocytic cells:

- dendritic cells,
- macrophages or
- B-lymphocytes (possibly activated T-lymphocytes).

APCs recognize a foreign cell by the absence of HLA I ( MHC I) and phagocytose it, then expose it to the surface of its antigen embedded in the molecular pocket of individually specific HLA I and HLA II (MHC) proteins. A naive T cell or effector cell binds to APC cells.

Recognition of the HLA-peptide complex by a specific TCR receptor, costimulation (e.g., CD28), and cytokine expression (interleukin-2) is required to activate a T cell or effector cell.

In the case of a naive T-cell, activation triggers clonal expansion and differentiation (T-helper, T-cytotoxic, ...), in the case of an effector T-cell, it activates effector functions.



APC antigen presentation by the cell. After activation, the naive T cell differentiates into a Tc or Th cell.