Allergy-immunology glossary

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Towards a clear designation of some of the terms used in allergology and immunology.

**Antigen processing**
The intracellular conversion of protein antigens derived from the extracellular space or the cytosol into peptides. This usually involves endocytosis of the antigen and either minimal cleavage or unfolding.

**Antigen presentation**
The display of peptides bound by major histocompatibility complex (MHC) molecules on the surface of antigen presenting cells that permits specific recognition by T cell receptors and T cell activation. Classically, only antigen that is synthesized endogenously has access to the class I antigen presentation pathway. This presumes that direct infection of the APCs is a pre-requisite for developing immunity to viruses; and excludes the possibility of generating immunity to tumor-restricted antigens. MHC class II molecules present fragments derived from extracellular (exogenous) proteins that are located in an intracellular compartment. Whereas all nucleated cells express class I MHC, only a limited group of cells express class II MHC, which includes the antigen presenting cells (APCs).

**Antigen presenting cells (APCs)**
Antigen presenting cells are a functionally defined group of cells which are able to take up antigens and present them with MHC molecules on its surface to T lymphocytes. In addition, they must also express costimulatory molecules to optimally activate T lymphocytes. The principal APC are macrophages, dendritic cells (Langerhans cells), and B cells.

REFERENCES: