Allergy-immunology glossary

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

| **Interleukin-12 (IL-12)** | Interleukin-12 (IL-12) is a heterodimeric pro-inflammatory cytokine. IL-12 is produced by dendritic cells (DCs) and phagocytes in response to bacteria, bacterial products, and intracellular parasites, and to some degree by B lymphocytes. In vivo IL-12 acts at three stages during the innate/adaptive immune response to infection: 1. Early in the infection, it induces production from NK and T cells of IFN-gamma, which contributes to phagocytic cell activation and inflammation; 2. IL-12 and IL-12-induced IFN-gamma favor Th1 cell differentiation by priming CD4+ T cells for high IFN-gamma production; and 3. IL-12 contributes to optimal IFN-gamma production and to proliferation of differentiated Th1 cells in response to antigen. |
| **Interleukin-27 (IL-27)** | It has been more than 15 years since the identification of individual interleukin-27 (IL-27) and IL-27 receptor components. IL-27 along with IL-12, IL-23, and IL-35, belongs to the IL-12 cytokine family. These family members play roles in the regulation of T helper (Th) cell differentiation. IL-27 is unique in that it suppresses immune responses. The immunosuppressive effects of IL-27 depend on inhibition of the development of Th17 cells (an inflammatory T-helper population) and induction of IL-10 production. Moreover, administration of IL-27 or augmentation of IL-27 signaling suppresses some diseases of autoimmune or allergic origin, demonstrating its potential in therapy of diseases mediated by inflammatory cytokines. |
| **Heterodimer** | It is a protein composed of two polypeptide chains differing in composition in the order, number, or kind of their amino acid residues. |

REFERENCES