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IL-12家族细胞因子：肿瘤免疫治疗研究的热点分子 [点此下载全文](#)

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摘要:

利用细胞因子提高宿主免疫能力、破坏肿瘤细胞的免疫逃逸功能是肿瘤生物治疗的重要策略。IL-12细胞因子家族是具有高度同源性的一类异源二聚体细胞因子, 包括IL-12、IL-23、IL-27和IL-35, 它们均由活化的抗原提呈细胞如巨噬细胞和树突状细胞产生, 在辅助性T细胞分化过程中起重要作用。IL-12通过活化ATAT4信号转导途径产生IFN- γ 促进细胞免疫反应; IL-27主要活化STAT1途径增强细胞和体液免疫反应; 外源性IL-23可以产生抗肿瘤效应, 而内源性IL-23通过活化STAT3诱导产生IL-17, 从而促进肿瘤的发生和发展; IL-35可能是潜在的免疫抑制性细胞因子。总之, IL-12细胞因子家族成员在肿瘤免疫反应中各自发挥不同的作用, 已成为肿瘤免疫治疗和研究的热点分子。

关键词: [cytokine](#) [IL-12 cytokine family](#) [tumor biotherapy](#) [interleukin](#) [tumor immunity](#)

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Abstract:

Cytokines, which can improve the host immunity and hamper the immune escape of tumor cells, have become an important strategy for tumor biotherapy. Interleukin (IL)-12 cytokine family is composed of heterodimeric cytokines, including IL-12, IL-23, IL-27 and IL-35; they are produced by antigen-presenting cells such as macrophages and dendritic cells and play critical roles in the differentiation of helper T (Th) cells. IL-12 induces IFN- γ production through activating signal transducer and activator of transcription (STAT) 4 signaling pathway and enhances cellular immune response; IL-27 augments cellular and humoral immune responses through activating STAT1 pathway; exogenous IL-23 can produce anti-tumor effects, while endogenous IL-23 induces the production of IL-17 by activating STAT3, promoting development and progress of tumors; and IL-35 may be a potential immunosuppressive cytokine. In summary, IL-12 cytokine family plays distinct roles in anti-tumor immune responses and has become a focus of study in the research and immune therapy of tumors.

Keywords: [细胞因子](#) [IL-12细胞因子家族](#) [肿瘤生物治疗](#) [白细胞介素](#) [肿瘤免疫](#)

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