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摘要:

目的: 观察IL 2、IL 15对免疫编辑后NK细胞NKG2D的表达及其对鼻咽癌CNE2细胞杀伤活性的影响。方法: 抗CD56磁珠纯化NK细胞后分为4组: (1) 编辑前NK细胞组: 加入100 U/ml IL 2; (2) 单纯编辑组: NK细胞与CNE2细胞 10 : 1 混合, 加入100U/ml IL 2; (3) IL 2再培养组: 纯化编辑后的NK细胞, 加入1 000 U/ml IL 2; (4) IL 15再培养组: 纯化编辑后的NK细胞, 加入10 ng/ml IL 15。24 h后, 流式细胞仪检测各组NK细胞表面NKG2D的表达; LDH释放测定法测定效靶比20 : 1时各组NK细胞对CNE2细胞的杀伤活性。结果: 编辑前NK细胞组、单纯编辑组、IL 2再培养组、IL 15再培养组NK细胞表面NKG2D的表达率分别为(97.63±0.83)%、(53.50±1.25)%、(94.47±1.00)%、(98.07±0.21)%。IL 2、IL 15再培养组NK细胞 NKG2D的表达分别比单纯编辑组有显著的增加 (P <0.01), 该4组NK细胞对CNE2细胞的杀伤活性分别为(35.90±3.27)%、(4.70±2.30)%、(31.70±3.56)%、(40.18±2.94)%。IL 2再培养组、IL 15再培养组明显提高编辑后NK细胞对CNE2细胞的杀伤活性 (P <0.01), IL 15的作用强于IL 2。结论: 高剂量IL 2、IL 15可以上调免疫编辑后NK细胞表面NKG2D的表达, 恢复编辑后NK细胞对鼻咽癌细胞CNE2的杀伤活性, IL 15的作用强于IL 2。

关键词: [鼻咽肿瘤](#) [自然杀伤细胞](#) [NKG2D配体](#) [免疫编辑](#) [IL 2](#) [IL 15](#)

IL-2 and IL-15 up regulate NKG2D expression and enhance cytotoxicity of edited NK cells against nasopharyngeal carcinoma cells [Download Fulltext](#)

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Abstract:

Objective: To study the effects of IL 2 and IL 15 on the expression of NKG2D and the cytotoxicity of edited NK cells against human nasopharyngeal carcinoma cell line CNE2. Methods: NK cells were purified by anti CD56 MACS and were divided into four groups: non edited NK cells group (NK cells treated with 100 U/ml IL 2), edited NK cells group (NK cells co cultured with CNE2 cells at a ratio of 10 : 1 and then treated with 100 U/ml IL 2), edited NK cells retreated with 1 000 U/ml IL 2 group, and edited NK cells retreated with 10 ng/ml IL 15 group. Expression of NKG2D in each group was determined by FACS 24 h later. Cytotoxicity of NK cells against CNE2 cells (NK : CNE2 being 20 : 1) was measured by LDH releasing assay. Results: The expression of NKG2D in non edited NK cells, edited NK cells, edited NK cells retreated with IL 2, and edited NK cells retreated with IL 15 were (97.63±0.83)%, (53.50± 1.25)%, (94.47±1.00)%, and (98.07±0.21)%, respectively. The expression of NKG2D on edited NK cells retreated with IL 2 or IL 15 was significantly increased than that on edited NK cells (P <0.01). The cytotoxicity of non edited NK cells, edited NK cells, edited NK cells retreated with IL 2, and edited NK cells retreated with IL 15 against CNE2 cells were (35.90±3.27)%, (4.70±2.30)%, (31.70 ±3.56)% and (40.18±2.94)%, respectively. The cytotoxicity of edited NK cells was significantly enhanced after retreated with IL 2 or IL 15 (P <0.01), with those retreated with IL 15 being stronger than those retreated with IL 2. Conclusion: High dose IL 2 and IL 15 can up regulate the expression of NKG2D on edited NK cells and restore their cytotoxicity against CNE2 cells, with the efficacy of IL 15 stronger than that of IL 2.

Keywords: [nasopharyngeal neoplasms](#) [natural killer cell](#) [NKG2D ligand](#) [immunoedit](#) [IL 2](#) [IL 15](#)

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