

免疫細胞組庫定序分析應用

-腫瘤免疫治療

腫瘤免疫治療是近年來許多學者投入研究的領域。2012年，Carl June教授成功使用第二代CD19嵌合抗原受體T細胞 (chimeric antigen receptor T cell, CAR-T) 治癒7歲的急性淋巴性白血病女孩Emily Whitehead；2013年Science雜誌將腫瘤免疫療法選為年度最重大的科學突破，除此之外，FDA近年相繼批准多種免疫治療藥物上市，代表腫瘤免疫療法正式進入新的里程碑。

目前腫瘤免疫治療仍有許多待解決的問題，例如治療效果、所產生的抗藥性問題、組合療法的安全性、免疫療法相關的副作用 (Immune-related adverse events, irAE)及病患癒後的監測，對於輸入細胞療法 (Adoptive cellular therapy) 如何有效率地篩選腫瘤特異性T細胞...等，都仍然是目前極需解決的重要議題。

免疫組庫定序分析 (immune repertoire sequencing)可提供進行腫瘤免疫相關研究學者一個新的解決方案，安盛基因科技為您收集了近年來使用免疫組庫定序分析所進行的腫瘤免疫治療相關研究，希望能對您的研究有所幫助。

PD-1/CTLA-4:

Integrated molecular analysis of tumor biopsies on sequential CTLA-4 and PD-1 blockade reveals markers of response and resistance

Sci Transl Med. 2017 Mar 1;9(379).

immune-related adverse events (irAE):

Immune toxicities elicited by CTLA-4 blockade in cancer patients are associated with early diversification of the T cell repertoire

Cancer Res. 2017 Mar 15;77(6):1322-1330.

The T cell repertoire in tumors overlaps with pulmonary inflammatory lesions in patients treated with checkpoint inhibitors.

Oncoimmunology. 2017 Oct 26;7(2):e1386362.

Bispecific antibodies (BsAb):

Targeting CD123 in acute myeloid leukemia using a T-cell-directed dual-affinity retargeting platform

Blood. 2016 Jan 7;127(1):122-31.

Tumor infiltrating lymphocytes (TILs):

Immunogenetic Profiling for Gastric Cancers Identifies Sulfated Glycosaminoglycans as Major and Functional B Cell Antigens in Human Malignancies

Cell Rep. 2017 Aug 1;20(5):1073-1087.

Diversity and divergence of the glioma-infiltrating T-cell receptor repertoire

Proc Natl Acad Sci U S A. 2016 Jun 21;113(25):E3529-37.