

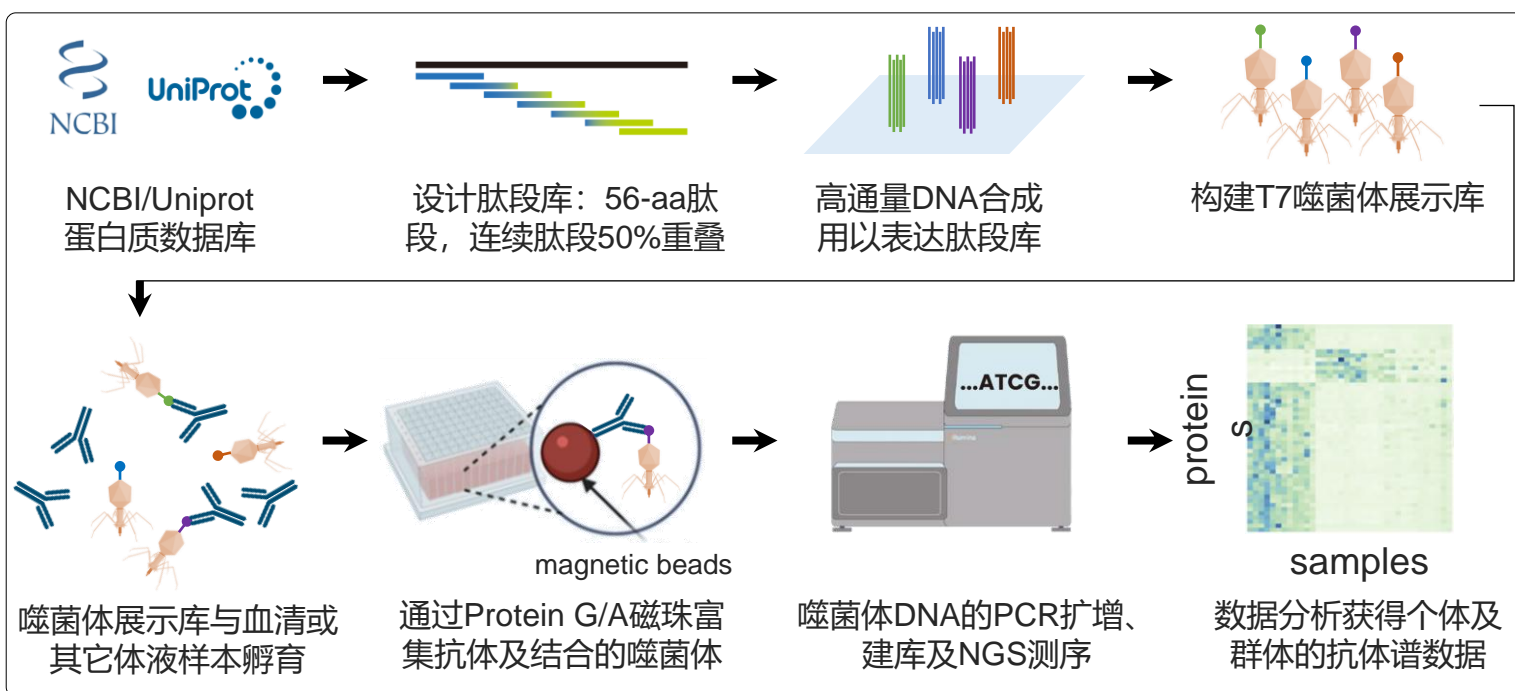
抗体谱分析

PhIP-Seq噬菌体免疫沉淀测序技术平台

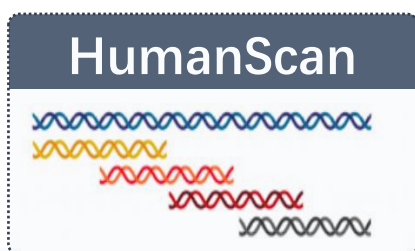
概述

噬菌体免疫沉淀测序（Phage immunoprecipitation sequencing, PhIP-seq）技术是近年来新兴的一项高通量筛选技术，依托高库容的噬菌体展示多肽库、抗体免疫沉淀及高通量测序技术，进行基于抗原-抗体匹配的、全局性的、系统性的抗体谱（Antibody repertoire）分析，是抗体组学（Antibodymics）研究的新型工具。

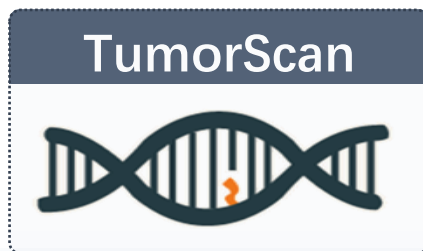
原理



多种噬菌体展示库



全覆盖人蛋白质组
56-aa 50% 重叠



源自TCGA及Cosmic
~ 70万条突变肽
56-aa 50% 重叠

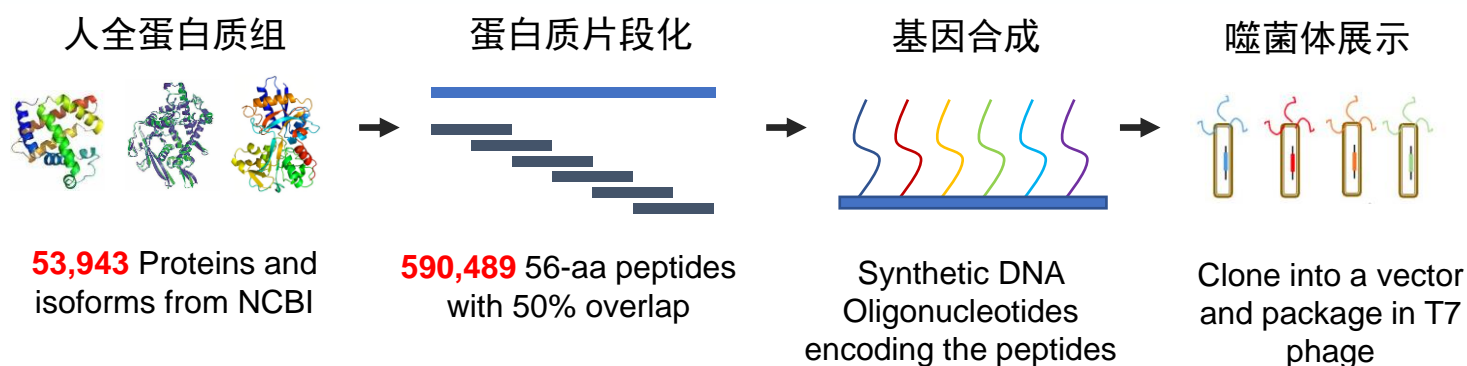


12-aa随机肽库 ~ 10¹⁰

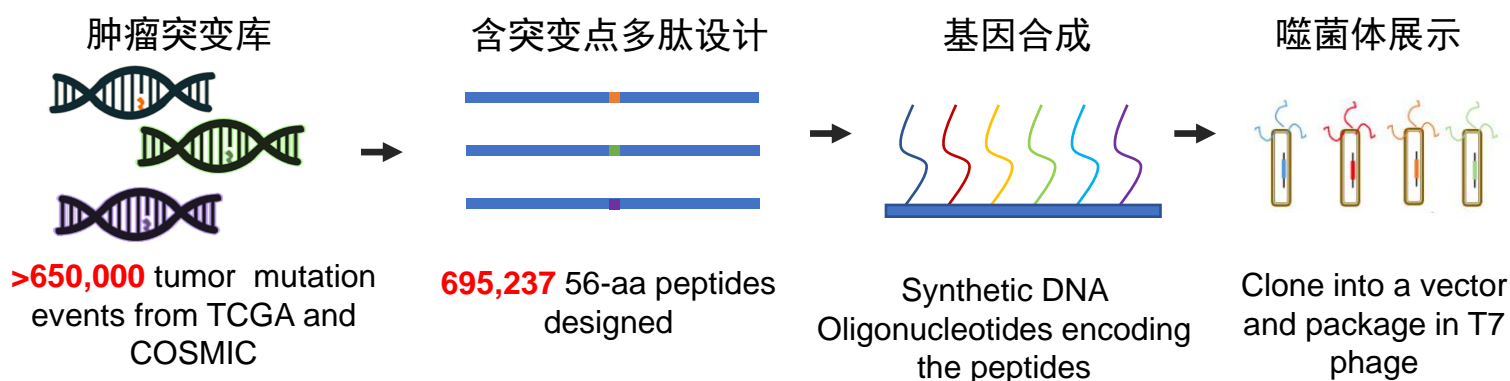
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HumanScan全覆盖人蛋白质组库



TumorScan肿瘤突变位点的高度覆盖噬菌体肽库



样本类型和要求

血清/血浆：>50 μ L； 其他体液：如脑脊液，组织液等，视抗体浓度而定。

参考文献

- [1] Larman HB, Zhao Z, Laserson U, *et al.* Autoantigen discovery with a synthetic human peptidome. **Nat Biotechnol.** 2011 May 22;29(6):535-41.
- [2] Bourgonje AR, Andreu-Sánchez S, Vogl T, *et al.* Phage-display immunoprecipitation sequencing of the antibody epitope repertoire in inflammatory bowel disease reveals distinct antibody signatures. **Immunity.** 2023 May 4;S1074-7613(23)00185-1.
- [3] Shrock EL, Timms RT, Kula T, *et al.* Germline-encoded amino acid-binding motifs drive immunodominant public antibody responses. **Science.** 2023 Apr 7;380(6640):eadc9498.