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Total Peptide Library Construction Technology

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The total peptide libraryis a collection of a large number of small peptide of specific length and different sequences, which includes the permutation and combination of various amino acid sequences in the short peptide of this length. The general synthetic peptide library uses 20 kinds of natural amino acids as building units, and the size of the library capacity is determined by the number of amino acids (n) that constitute a peptide of a specific length, which can be simply calculated as 20^n. For example, to construct a dipeptide library, there are 20^2(400=4×10^2) combinations, the tripeptide library has 20^3(8,000=8×10^3) combinations, and so on. Therefore, the larger library capacity complicates the synthesis of peptide drugs and becomes a bottleneck in the development of peptide drugs.

Creative Peptides Design PlatformTM(CPDP) has developed peptide information compression technology, which uses bioinformatics methods to compress peptide information, which can integrate the information of multiple peptide into one peptide, so as to contain a large amount of peptide information in a relatively small storage volume. It opens up a new way to research and develop peptide drugs. Based on this technology, we have constructed a total peptide library, containing nearly 500 million different peptide sequence information in a library of approximately 80,000 peptides, which will increase the screening efficiency by approximately 6,000 times.

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https://www.creative-peptides.com/services/total-peptide-library-construction-technology.html

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