

论著

## ErbB3胞浆激酶区氨基酸变异位点分析

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**摘要** 背景与目的: 通过生物信息学方法研究表皮生长因子受体家族ErbB3激酶区的氨基酸替换位点。材料与方法: 采用序列对比方法研究ErbB受体家族和酪氨酸受体家族的同源序列, 以得到可能的重要替换位点, 并在EGFR晶体结构上定位。结果: 共存在54个可能有意义的替换位点, 其中17个最为重要, R726E, L738T, E740H, D815N, K830Q, L836V, R838D可能是关键的替换位点; ErbB3的DFG motif后缺乏有效的酪氨酸位点。结论: 这些替换可能与ErbB3活性减弱有关。

**关键词** [ErbB3](#); [胞浆激酶区](#); [氨基酸位点](#)

## An Analysis of Amino Acid Substitution in ErbB3 Tyrosine Kinase Domain

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**Abstract** **BACKGROUND & AIM:** We explored the amino acid substitution in ErbB3 tyrosine kinase domain by bioinformatics. **MATERIALS AND METHODS:** ErbB receptor family and tyrosine receptor family sequence alignments were performed to find out the important amino acid substitution sites in ErbB3 kinase domain, these sites was then located on EGFR crystal structure. **RESULTS:** A total of 54 substitution sites which might be meaningful were identified, in which 17 sites could be more important, R726E, L738T, E740H, D815N, K830Q, L836V, R838D might be the key substitution sites related to tyrosine kinase activity decrease. The tyrosine site near DFG motif in ErbB3 appeared to be ineffective. **CONCLUSION:** These substitution sites are related to the decrease of tyrosine kinase activity.

**Keywords** [ErbB3](#) [tyrosine kinase domain](#) [amino acid site](#)

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