Detection of Target Fragment Mutation Induced by Chronic Myeloid Leukemia

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Technology description

1. Technical overview
This is a technique that can be used to detect target splicing variants of the BCR-ABL fusion gene using DNA polymerase.
two。 The impact of technology
Gel electrophoresis can be used to quantify the mRNA expression level of mutant fusion gene which is difficult to quantify accurately.
This technology realizes simple, low-cost and efficient target joint mutation detection.
This technique makes it possible to detect target connector variants effectively, simply and cheaply.
Fluorescence detection and analysis based on graphene oxide can be used in the early diagnosis of chronic leukemia, and the diagnosis can be applied to treatment planning.
3. Technical content
Detect splicing variants of the BCR-ABL gene:
A) the probe DNA, which produces a specific splicing variant base sequence, connects the fluorescent substance to the 5 'terminal and prepares the phosphorylated fluorescent probe DNA, at the 3' end.
B) the primer pairs for primary and secondary PCR are connected to the DNA with splicing variant sequences. Add DNA polymerase for nested PCR,
C) graphene oxide (GO) was added to the PCR product,
D) when the fluorescent probe DNA is combined with the template DNA, the fluorescence signal is detected. When the fluorescent probe DNA was combined with other DNA, the fluorescence signal was not detected. This allows the detection of splicing variants of the BCR-ABL fusion gene.

Application area

Medical systems, medical services, pharmaceutical industry, research and development services, big data analysis platforms, genome consulting

Institution

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