



Human Breast Cancer Multiplex PCR Control Kit

Catalog Number MG-0003

(For Research Use Only)

Introduction

Breast cancer is a heterogeneous disease, comprising several histological types that have distinct biological features and different clinical behavior. Breast cancer has been extensively studied with molecular methods. Several genes have been demonstrated to be gene signature of breast cancer, including p21, EGFR, Her2, PR, ER, p-cadherin and BRCA1. The molecular features of breast cancer may potentially provide additional diagnostic, prognostic and predictive information and facilitate the development of accurate and tailored therapy. Signosis developed multiplex PCR kit to amplify 6 genes, p21, EGFR, Her2, PR, ER and BRCA1 in one PCR reaction.

Principle

Multiple targets are amplified simultaneously with different primers in one PCR reaction. The resulted products with differential sizes are easily distinguished with regular agarose gel electrophoresis. The parameters of PCR including the primer concentration and the reaction buffer are optimized in order to provide the highest specificity and sensitivity of amplification of multiple targets in one reaction.

Materials provided

- Control cDNA mix
- Human breast cancer PCR primer mix for P21, EGFR, Her2, PR, ER and BRCA1
- PCR buffer mix
- PCR Polymerase

Material required but not provided

- Sample cDNA
- PCR machine

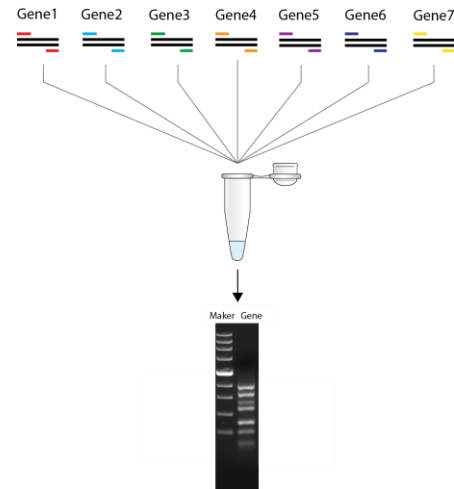


Diagram of Multiplex PCR Kit

PCR amplification

- (1) Prepare PCR reactions
Mix the following component for one reaction:
18.8 ul PCR buffer mix
0.5 ul control cDNA mix or specific cDNA
0.5 ul PCR primer mix
0.2 ul PCR Polymerase
Note: make a master mix by multiplying the volume by the number of your reactions
- (2) Proceed PCR cycles:
Heat the reactions at 94 °C for 30 sec, and proceed PCR for 35 cycles as follows:
94 °C 30 seconds
58 °C 30 seconds
72 °C 30 seconds
Note: PCR cycle can be adjusted according to a specific primer designing.
- (3) Run PCR products on 1.5% agarose gel electrophoresis.

Data example

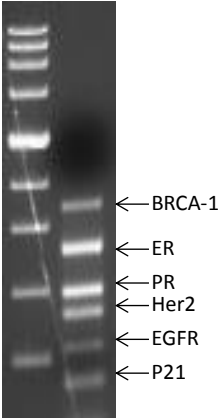


Figure: Breast Cancer Multiplex PCR Kit, subjected to PCR for Multiplex breast cancer genes with 35 cycles