



Cancer Stem Cell Multiplex PCR Kits

Catalog Number MG-0009 to MG-0025

(For Research Use Only)

Introduction

Cancer stem cells (CSCs) are the cancer cells that have stem cell-like properties including self-renewal and multipotency. CSCs are also called tumor-imitating cells and are capable of proliferation and differentiation into multiple cell types. CSCs have been found in tumor and often display characteristics of treatment resistance. Therefore, it is important to identify these cells in order to understand the mechanisms of resistance and predict outcomes of chemotherapy and radiotherapy. Signosis has selected cancer stem cell makers for different types of cancers and developed a series of Cancer Stem Cell Multiplex PCR Kits to facilitate cancer stem cells study. The kits can be used for human, mouse, and rat samples.

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
- Cancer Stem Cell Multiplex PCR primer mix on the basis on the specific product you want.
- PCR buffer mix
- PCR Polymerase

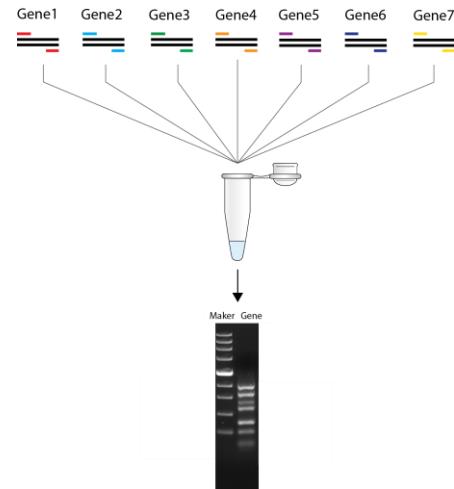


Diagram of Multiplex PCR Kit

Material may be required but not provided

- Sample cDNA
- PCR machine

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.

Cancer Stem Cell Multiplex PCR Kits Available:

Catalogue Number	Product Names	Markers
MG-0009	Breast Cancer Stem Cell Multiplex PCR I	ALDH1A1, BMI-1, CD24, CD44, CXCR4
MG-0010	Breast Cancer Stem Cell Multiplex PCR II	DLL4, EpCAM/TROP1, ErbB2/Her2, GLI-1, GLI-2
MG-0011	Breast Cancer Stem Cell Multiplex PCR III	IL-1 Beta, IL-6 R alpha, CXCR1/IL-8 RA, 6/CD49f, PTEN
MG-0012	Colon Cancer Stem Cell Multiplex PCR	ALCAM/CD166, ALDH1A1, CD44, DPPIV/CD26, EpCAM/TROP1, GLI-1
MG-0013	Glioma/Medulloblastoma Cancer Stem Cell Multiplex PCR I	A20/TNFAIP3, ABCG2, CX3CL1/Fractalkine, CX3CR1, CXCR4
MG-0014	Glioma/Medulloblastoma Cancer Stem Cell Multiplex PCR II	Integrin alpha 6/CD49f, L1CAM, Musashi-1, c-Myc
MG-0015	Glioma/Medulloblastoma Cancer Stem Cell Multiplex PCR III	Nestin, Podoplanin, HIF-2 alpha/EPAS1, IL-6 R alpha
MG-0016	Head & Neck Cancer Stem Cell Multiplex PCR	ABCG2, ALDH1A1, BMI-1, CD44
MG-0017	Leukemia Cancer Stem Cell Multiplex PCR I	CD34, CD38, CD44, CD47, CD96
MG-0018	Liver Cancer Stem Cell Multiplex PCR	AFP, ANPEP, CD90/Thy1, NF2/Merlin
MG-0019	Lung Cancer Stem Cell Multiplex PCR	ABCG2, ALDH1A1, CD90/Thy1, EpCAM/TROP1, SCF R/c-kit
MG-0020	Melanoma Cancer Stem Cell Multiplex PCR	ABCG2, ALCAM/CD166, MS4A1/CD20, NGF, NGFR/TNFRSF16
MG-0021	Myeloma Cancer Stem Cell Multiplex PCR	CD27/TNFRSF7, CD38, MS4A1/CD20, Syndecan-1/CD138
MG-0022	Osteosarcoma Cancer Stem Cell Multiplex PCR	ABCG2, Nestin, STRO-1
MG-0023	Ovarian Cancer Stem Cell Multiplex PCR	AMACR, CD44, SCF R/c-kit
MG-0024	Pancreatic Cancer Stem Cell Multiplex PCR	BMI-1, CD24, CD44, CXCR4, EpCAM/TROP1
MG-0025	Prostate Cancer Stem Cell Multiplex PCR	AMACR, BMI-1, CD44, c-Myc