



ampli set BREAST

24 tests (144 reactions)

cat 1412

detection of methylation of promoter of genes involved in breast cancer

The methylation of the residues of cytosine in the "CpG islands" is very important for the regulation of the genic expression. The hyper-methylation of the "CpG islands" in the promoter region of a gene suppress the transcription of the same gene. In many tumours the hypermethylation of the promoter of the suppressor genes, as p16, p15, E-cadherine and other genes as "DAP-kinase", inhibitor gene of the metastatic progression, 06-metilguanina DNA methyltransferase (MGMT), gene involved in the repair of DNA, Glutathione-S-transferase (GSPT1) involved in the prevention of the oxidative damage of DNA etc. Plasma and serum of patients carrier of malignant neoplasia contains much genomic DNA than the control subjects.

The principle of the assay is the extraction of genomic DNA from plasma or serum, the treatment with bisulfite sodium in order to transform the unmethylated residue of cytosine in uracil, the PCR amplification with specific oligonucleotides for the methylated sequences and unmethylated (MSP: methylation specific PCR) followed by the detection by electrophoresis on agarose gel. The assessment of the state of hypermethylation of a gene is an appreciable molecular marker of the risk, and allows a precocious diagnosis and a prognosis of a neoplastic diseases. The kit allows the detection of methylation of the promoter of the oncosuppressor p16, of the BRCA1 gene, involved in the repair of DNA, and of the glutathione-S-transferase (GSTP1), which show respectively a hypermethylation rate of the 15-25%, of the 30% and of the 30/60% in non-hereditary breast cancer.

Principle of assay

Extraction from :serum, tissue, mammary duct washing.

Conversion :treatment with sodium bisulfite.

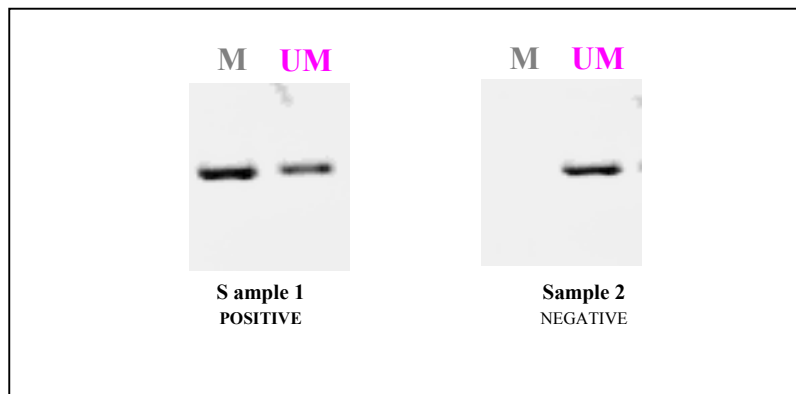
Amplification with specific primers for methylated and unmethylated sequences of the promoter of the genes:

p16- BRCA1- GSTP1

Detection on agarose gel

Applicability

Serum, tissue, sputum, mammary duct washing



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