

## Serum-free Media

**Panserin 412** is a complete, ready-to-use medium for the serum-free cultivation of a multitude of adherent cells.

### Composition

Based on Iscove's MEM, trace elements, albumin, cholesterol, soya lipids, vitamins and insulin were added to the medium. It does not contain any growth or attachment factors.

### Suitability

Panserin 412 is a multi-purpose medium suitable for a variety of adherent cells. Panserin 412 contains special attachment factors for the successful cultivation of cells that hardly attach. With every adaption to serum-free media, changes of the cells should be taken into consideration. These changes may concern the morphology, the karyotype, the surface marker etc. Thus cells in serum-free medium don't always have to be identical with those from the culture containing serum in which they originate (selection).

### Instructions for use

Detailed instructions will be provided with the accompanying datasheet for Panserin 412. In addition, instructions for use can also be found at [www.pan-biotech.com](http://www.pan-biotech.com).

**Panserin 413** is a ready-to-use medium for the serum-free cultivation of lymphocytes from whole blood.

### Composition

Based on RPMI 1640/DMEM-F12, trace elements, albumin, cholesterol, soya-lipids and vitamins were added to the medium. A growth factor mixture is also supplied which has to be added to the medium immediately before use.

### Suitability

Panserin 413 has been developed for the cultivation of lymphocytes from whole blood. Normally blood cells die rather quickly in culture, only lymphocytes can be cultivated over multiple divisions in culture. To achieve a division of non-proliferating cells, the cells must be stimulated with certain mitogens. These mitogens are mostly herbal lectins (phytohemagglutinin, PHA).

### Instructions for use

Detailed instructions will be provided with the accompanying datasheet for Panserin 413. In addition, instructions for use can also be found at [www.pan-biotech.com](http://www.pan-biotech.com).

**Panserin 416** is a serum-free medium (basal medium) which is, after supplementation with growth factors, suitable for the production of dendritic cells.

### Composition

Based on RPMI 1640/DMEM/F-12, trace elements, albumin, cholesterol, soya-lipids and vitamins were added to the medium. A growth factor mixture is also supplied which has to be added to the medium just before use.

### Suitability

Dendritic cells are highly specialized antigen-presenting cells and can initiate and regulate antigen-specific immune responses. This ability can be used in order to generate immune responses against certain proteins of tumour cells and thus the immune system itself could be able to fight against tumours. Dendritic cells have been isolated from a great variety of non-lymphatic and lymphatic tissues of human beings, mice and other species.

For the generation of tumour vaccines, dendritic cells can be produced from the peripheral blood of tumour patients. In clinical studies the principal effectiveness of a vaccination with dendritic cells has been shown.

Production and serum-free cultivation of dendritic cells from mononuclear cells of peripheral blood (PBMC).

Serum-free cultivation of dendritic cells in Panserin 416  
After the last washing step the mononuclear cells are transferred with a cell density of  $1 \times 10^7$  cells/ml into Panserin 416. In order to remove non-adherent cells, culture dishes are put into the incubator for 2 hours. Then the supernatant is carefully taken off and replaced by new Panserin 416. GM-CSF (800 U/ml) and interleukin-4 (500 U/ml) are added as growth factors. The culture dishes are incubated for another 6 days in the incubator and every day half of the medium is replaced by new medium which is supplemented with GM-CSF and IL-4.

### Instructions for use

Detailed instructions will be provided with the accompanying datasheet for Panserin 416. In addition, instructions for use can also be found at [www.pan-biotech.com](http://www.pan-biotech.com).

Panserin 412 <sup>(1)</sup>	100 ml 500 ml	P04-710412M P04-710412
Panserin 413 <sup>(3)</sup>	500 ml	P04-710413
Panserin 416 <sup>(3)</sup>	500 ml	P04-710416

(1) usually on stock, (2) minimum order 10 l, (3) available on request