

Evaluation of BIOMIMESYS® hydro scaffold in mice bearing subcutaneous HCT 116 Human Colorectal tumour cells

Cell culture conditions

Tumour cells will be grown as monolayer at 37°C in a humidified atmosphere (5% CO₂, 95% air). DMEM (ref: BE12-604F, Lonza, Verviers, Belgium) supplemented with 10% fetal bovine serum (ref: 3302, Lonza) and 1% penicillin streptomycin (ref: DE-17-602F, Lonza, Verviers, Belgium). The cells are adherent to plastic flasks. For experimental use, tumour cells will be detached from the culture flask by a 5 minute treatment with trypsin-versene (ref: BE02-007E, Lonza) at 37°C, in Hanks' medium without calcium or magnesium (ref: BE10-543F, Lonza) and neutralized by addition of complete culture medium. The cells will be counted in a hemocytometer and their viability will be assessed by 0.25% trypan blue exclusion assay.

Tumour model development of HCT 116 human colorectal tumours subcutaneously xenografted using Biomimesys®.

Cell line amplification

Briefly, 50 000 cells in 25 µl will be incubated carefully seeded on the center of the hydro scaffold in 96-well flat-bottom microtitration plates containing BIOMIMESYS® hydro scaffold. 30 minutes after cells implantation, the wells will be completed up to 200 µl as described in the 'first steps' document.

Every 48 hours, 100 µl of culture medium will be removed and replace by 100 µl of fresh culture medium. Four days after cells implantation, matrix will be transferred in 24-well flat-bottom microtitration plates containing 2 ml of culture medium (to ensure optimal growth conditions).

Every 48 hours, 1ml of culture medium will be removed and replace by 1 mL of fresh culture medium.

Induction of HCT 116 tumours in animals

According to the number of cells in one hydro scaffold, Then, 8 female SWISS nude mice will be subcutaneously implanted into the right flank with one (D0). The tumour cells implantation with BIOMIMESYS® hydro scaffold will be performed twenty four to seventy two hours after a whole body irradiation of mice (2 Gy 60Co, BioMep, Bretenières, France). Twice weekly monitoring of mice for body weight and tumor growth.

- Daily monitoring of mice for behavior and survival.
- Sacrifice, autopsy (macroscopic examination) after a maximum of 10 weeks after the cell injection.

Contact Information

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