

Product Manual

HycopGel Tumor Allograft Kit

Product Introduction

The HycopGel Tumor Allograft Kit is an extracellular matrix microenvironment constructed from biosynthetic materials, suitable for tumorigenicity tests in various mouse tumor models. Compared with traditional matrix gels, its composition is precisely controllable, with no batch differences or xenogeneic interference, excellent biocompatibility, high transplantation survival rate, and no immune interference. It is easy and stable to operate, suitable for scaled experiments, has no ethical concerns, and is compatible with clinical translation research, providing a more reliable and efficient solution for tumor allograft experiments.

Product Information

CR02A01-05/10			
Product Information	Specification	Storage conditions	Validity period
M Gel	5 mL / 10 mL	-20°C	1 year
H Buffer	5 mL / 10 mL	4°C	1 year

Product Application

- In vivo tumorigenicity experiments of various tumor models

Applicable cell types

- Tumor cell line

Subcutaneous Tumor Xenograft Model (CDX)

[Cell Room Materials, Reagents, and Colloid Preparation Steps]

(1) Material Preparation

- 1.1 mL syringe
2. Tumor cell lines

(2) Reagent Preparation Steps

- Place MGel and HBuffer in a biosafety cabinet and allow them to melt or warm to room temperature.

(3) Steps for preparing colloid

1. After passaging the tumor cell lines, count them, collect the cell pellet after centrifugation, resuspend the cells in HBuffer to obtain a tumor cell suspension in H Buffer with a density of 4×10^6 cells/mL.

2. Take equal volumes of MGel and HBuffer tumor cell suspension and mix evenly in a 1:1 ratio to obtain a cell density of 2×10^6 cells/mL.
3. After mixing, draw the colloidal mixture loaded with cells into a syringe, and equip it with a needle for standby (24G recommended).
4. Prepare the finished injection syringe and transport it to the animal room at room temperature.

Note 1: It is recommended that the temperature does not exceed 37°C

[Animal Room Materials and Animal Injection Preparation Steps]

(1) Material Preparation

1. Syringe for injecting tumor cell mixed colloid containing MGel and HBuffer
2. Immunodeficient mice aged 2.5-6 weeks
3. Anesthetic preparation for mice

(2) Steps for subcutaneous tumor injection in mice

1. Use the prepared syringe to inject the required volume for the experiment subcutaneously into the experimental mice.

Note2: It is recommended to inject 0.2mL subcutaneously, but the actual amount should be determined according to need. If resistance increases due to the gel during injection, inject slowly to avoid the needle spraying.

Note3: Taking the human colorectal tumor cell line HCT-116 as an example, the recommended cell concentration and injection volume are as follows. After 4 weeks of feeding, the tumor tissue in mice can reach a size of over 1000mm³.

Tumor cells	Cell concentration	Injection volume	Injection site	Mouse strain
HCT 116	2×10^6 cells/mL	0.2mL	Subcutaneous injection	C.B17/Icr-Prkdc ^{scid} /CrINarl

2. Observe and measure the size of the inoculated tumors weekly, and after 4-5 weeks of feeding, the tumor tissue can be harvested.

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References

1. Tovar, et al. Essenburg, and Carrie Graveel. "In vivo Efficacy Studies in Cell Line and Patient-derived Xenograft Mouse Models." Bio-protocol 7.1 (2017): e2100-e2100.
2. Yao, et al. "Establishment and characterization of intraperitoneal xenograft models by co-injection of human tumor cells and extracellular matrix gel." Oncology Letters 10.6 (2015): 3450-3456.
3. Marrella, et al. "3D porous gelatin/PVA hydrogel as meniscus substitute using alginate micro-particles as porogens." Polymers 10.4 (2018): 380.

Other products

Product Name	Item Number	Specification
Cell recovery solution	CR04A01-25	1 bottle
HycopGel3D Cell Sphere Kit	CR01A01-05/10	1 box
HycopGel Human Colorectal Cancer Organoid Culture Kit	CR03A01-B1	1 box
HycopGel Human Esophageal Cancer Organoid Culture Kit	CR03A01-B2	1 box
HycopGel Human Gastric Cancer Organoid Culture Kit	CR03A01-B3	1 box
Temperature guide sheet for cell culture	CR03C01	a piece



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