

Claims

1. A method for obtaining an animal model for screening anti-tumor drugs, comprising
 - (1) cultivating a primary tumor cell obtained from a tumor biopsy sample of a patient in a composition comprising:
 - a) 0.01-1.0 mg/L Hydrocortisone;
 - b) 1.0 -10.0 mg/L Inulin;
 - c) 1.0-20.0 µg/L Cholera toxin;
 - d) 2.0-50.0 mg/L Adenine;
 - e) 1.0-30.0 µg/L EGF;
 - f) 1.0-30.0 µmol/L Y- 27632;
 - g) Pen/Strep;
 - h) 2-20% FBS;
 - i) F12 medium
 - j) DMEM with high glucose, and optionally
 - k) Non-Essential Amino Acids Solution;
 - l) GlutaMAX Supplement;
 - (2) implanting the primary tumor cell obtained from step (1) into an animal.
2. The method of claim 1, wherein the composition in step (1) comprises
 - a) 0.3-0.5 mg/L, preferably 0.4 mg/L Hydrocortisone;
 - b) 4-6mg/L, preferably 5 mg/L Inulin;
 - c) 7-9µg/L, preferably 8.3 µg/L Cholera toxin;
 - d) 20-30 mg/L, preferably 24.2 mg/L Adenine;
 - e) 8-12µg/L, preferably 10 µg/L EGF;
 - f) 8-12µmol/L, preferably 10 µmol/L Y- 27632;
 - g) Pen/Strep;
 - h) 8-12%, preferably 10% FBS;
 - i) F12 medium
 - j) DMEM with high glucose, and optionally
 - k) Non-Essential Amino Acids Solution;
 - l) GlutaMAX Supplement.
3. The method of claim 1, wherein the tumor biopsy sample is a needle biopsy sample.
4. The method of claim 1, wherein the concentration of the primary tumor cells in the sample obtained from a needle biopsy is less than about 2mol/L, less than about 1.9mol/L, less than about 1.8mol/L, less than about 1.7mol/L, less than about 1.6mol/L, less than about 1.5mol/L, less than about 1.4 mol/L, less than about 1.3 mol/L, less than about 1.2 mol/L, less than about 1.1 mol/L, less than about 1.0 mol/L, less than about 0.9 mol/L, less than about 0.8 mol/L, less than about 0.7 mol/L, less than about 0.6 mol/L, less than about 0.5 mol/L, less than about 0.4 mol/L, less than about 0.3 mol/L, less than about 0.2

- mol/L, less than about 0.1 mol/L, such as less than about 2 mol/L, less than about 1.7 mol/L, less than about 0.8 mol/L, less than about 0.64 mol/L, less than about 0.59 mol/L.
5. The method of claim 1, wherein the animal is a mouse or a rat, in particular an immunodeficient mouse.
- 5 6. The method of claim 1, wherein the primary tumor cell is cultivated with a feeder cell in the composition of step (1), in particular the feeder cell is a mouse embryonic fibroblast (MEF) cell, more particularly the MEF cells have been treated with mitomycin C.
7. The method of claim 1, wherein the primary tumor cell obtained in step (1) was implanted in to the animal in a hollow fiber, in particular the hollow fiber is made of
- 10 modified polyvinylidene fluoride, more particularly the hollow fiber is made of modified polyvinylidene fluoride and has a cut-off value of 500,000 Dalton.
8. The method of claim 1, wherein the hollow fiber was implanted subcutaneously into the animal.
9. An animal model for screening anti-tumor drugs obtained by the method of one of claims
- 15 1-8, wherein the animal is a mouse or a rat, in particular an immunodeficient mouse.
10. A method for screening anti-tumor drugs, comprising administering a candidate drug to the animal model of claim 9.
11. The method of claim 10, further comprising measuring tumor cell growth in the animal model of claim 9.
- 20 12. Use of the animal model of claim 9 in screening anti-tumor drugs.