U-CH1

Introduction

The U-CH1 cell line was developed by Silke Bruderlein and Peter Moller at the University of Ulm from a recurrent lesion presenting in a 56 year old male with sacral chordoma. It is one of the faster growing chordoma cell lines but requires being grown on a collagen coated surface.

Media formulation

Materials

- IMDM (Gibco, Cat# 12440079)
- RPMI 1640 (Gibco, Cat# 11875085)
- FBS, Certified, US (Gibco, Cat# 16000044) or equivalent quality FBS
- MEM NEAA (Corning, Cat# 25-025-CIR)
- GlutaMAX (Gibco, Cat#35050061)
- Nalgene Rapid-Flow Vacuum Filter (Thermo Scientific, Cat# 5660010)

(4:1) IMDM/RPMI 1640 + 10% FBS + 1% NEAA + 1% GlutaMAX media preparation protocol

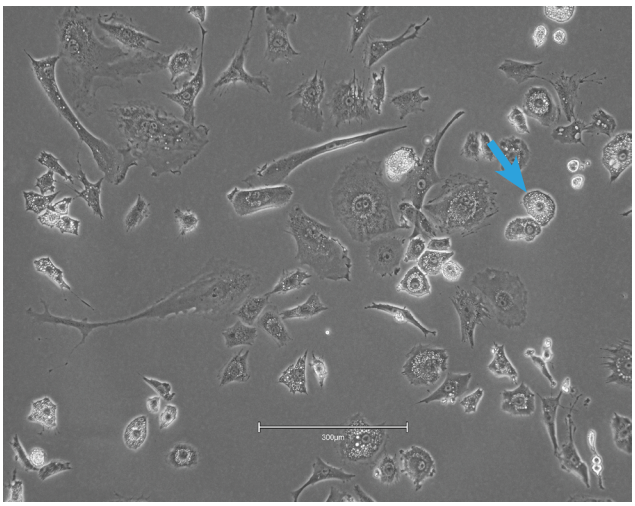
1. Prepare media in the bio-safety cabinet using aseptic technique. This media is made without antibiotics so extra precautions need to be taken.
2. Douse items in 70% Ethanol and place in bio-safety cabinet. Wait at least 10 minutes so ethanol has a chance to disinfect. Check for liquid at base of cap, if present, aspirate.
3. Create 500mL of media using volumes to the right by pipetting the media components into the upper compartment of a 500mL Nalgene vacuum filter, filter the components, and then store media at 4°C.

Component	Volume (mL)
IMDM	352
RPMI	88
FBS	50
NEAA	5
Glutamax	5
Total	**500**

Culturing characteristics

This cell line is thawed using CF Labs general thawing protocol, found here. This line relies on collagen for proliferation and viability; therefore, the vessel's surface should be collagen coated using the CF Labs general collagen coating protocol, found here. Using the above media formulation and grown on a collagen coated surface, U-CH1 cells exhibit a doubling time of approximately three days. The cell line exhibits a heterogeneous morphology with some cells spindly and some cobblestone. Also, some cells contain on the order of tens to hundreds of vacuoles while others contain very few or none. **(A)** U-CH1 representative image. The blue arrows is pointing to a cell with many vacuoles. **(B)** In a 96-well plate, plating 2,000 cells/well (6,250 cells/cm^2) will yield 15% confluence 36 hours after plating, labeled as day 0 where 36 hours is the time allowed for cells to adhere and spread out on the plate. The cells reach 90% confluence after seven days. This information can be extrapolated to other vessel types.

A.



B.