Product description

NCH93 is a patient-derived meningioma cell line established from the first relapse of a WHO grade III meningioma. Tumour tissue was obtained during surgical resection from a 64-year-old male patient.

Name: Meningioma grade III NCH93 cell line

Cancer type: Brain Cancer

Cancers detailed: Meningioma/ Anaplastic (malignant) meningioma

Organism: Human

Donor: Male, 64Y

Tissue: Brain (left parieto-occipital lobe)

Growth properties: Adherent

Model: Cancer cell line

Conditional: No

CRISPR edited: No

Production details: Patient-derived cell line established from human tumour tissue obtained during surgical resection and expanded in vitro.

Cellosaurus ID: CVCL_E5ZE

Contributor(s)

Inventor: Christel Herold-Mende
Institute: Heidelberg University

Properties

Product format: Frozen

Unpacking and storage:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Recommended medium: DMEM (High Glucose 4.5g/L, without sodium pyruvate and HEPES), 1% GlutaMAX, Sodium bicarbonate (3.7g/L), 10 % FCS, 1 % Pen/Strep.

Subculture: Discard the used medium and rinse with PBS (T25: 2 mL; T75: 5 mL). Detach the cells using Trypsin/EDTA (0.05%) (T25: 1 mL, T75: 2 mL) at 37 °C for a maximum of 2 minutes. Stop the enzymatic reaction with FCS-containing medium (at least 4 times the volume of trypsin used) and rinse the cells several times before resuspending in culture medium and transferring to culture flasks.

Cryopreservation: Determine cell count and check for mycoplasma infection. Centrifuge at 300xg for 5 minutes at RT. Discard the supernatant and resuspend the pellet in **complete culture medium +10% DMSO +10% FCS.** Freeze the vials at -80 °C and transfer them to liquid nitrogen the day after.

Culture conditions: 37.0°C ± 1.0°C incubator with 5.0% ± 1.0% CO_2

Handling instructions

Thawing:

1. Please ensure that vials are frozen when received, and store at **<-130 °C long term**. When removing frozen cells from storage, it is important to minimize exposure to room temperature (15 - 25°C). If not proceeding directly to thawing, place the cells on dry ice or in a liquid nitrogen container.
2. Prepare sufficient culture medium at room temperature (T25 flask for 1 x 10^6 cells, T75 flask for up to 5 x 10^6 cells).
3. **Do not thaw at room temperature.** To thaw, swirl the vial quickly in a 37 °C water bath with O-ring and cap above the water to avoid contamination. Remove from the water bath when the **ice crystals are slightly dissolved** and wipe the exterior with 70% ethanol or isopropanol before transferring to a biosafety cabinet. Further steps should be conducted under aseptic conditions.
4. We strongly recommend that the volume of cell suspension is measured at this point, and a 20 uL aliquot be removed for a **viable cell count** using trypan blue or similar dye. This ensures that provided cells are viable, and the cell count can be used to determine volume of growth medium to be added to the cell suspension.
5. Add 1 ml of culture medium to the vial and carefully resuspend.
6. Transfer the cell suspension into a 15 mL tube containing prepared culture medium in a suitable tissue culture flask.
7. 24 hours after thawing, change the medium to remove dead cells and remnants of freezing medium.
8. Cells should be provided with fresh medium twice a week. Remove and discard the used medium and add a suitable volume of fresh medium (5 mL for T25 and 15 mL for T75). At a confluence of less than 50%, only change the medium partially (eg. exchange 3 mL of medium in a T25 flask, and 10 mL in a T75 flask).

References

- Yu et al. 2021. Cancers. 13(23):5898. PMID: 34885009.
- Jungwirth et al. 2021. Cancers. 28:506:1-10, PMID: 33652084.
- Jungwirth et al. 2019. Cancers. 11(4):545. PMID: 30991738.
- Jungwirth et al. 2021. Cancer Lett. 506:1-10. PMID: 33652084.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: Meningioma grade III NCH93 cell line, was invented by Christel Herold-Mende at the University of Heidelberg (CancerTools.org #162305).