

U2OS-CRISPR-SNAPf-Nup358/RanBP2 | 300663

Key features

Description

U2OS-CRISPR-SNAPf-Nup358/RanBP2 is a cell line derived from U2OS cells. It features a CRISPR-Cas9 system targeting Nup358/RanBP2, a component of the nuclear pore complex (NPC). The cells are stably expressing SNAPf, a fluorescently labeled protein that binds to Ran. This cell line is used for studying the function of Nup358/RanBP2 in the NPC and its role in Ran transport and nuclear envelope integrity.

Organism Human

Tissue U2OS cells

Disease None

Metastatic site None

Applications Study of nuclear pore complex function, Ran transport, and NPC assembly.

Characteristics

Age 15 days

Gender None

Ethnicity None

Morphology Epithelial cells

Cell type U2OS cells

Growth properties None

References

Citation U2OS-CRISPR-SNAPf-Nup358/RanBP2 (Accession ID: 300663)

Biosafety level 1

Product sheet

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NCBI_TaxID 9606

CellosaurusAccession [U2OS-CRISPR-SNAPf-Nup358/RanBP2](#) (U2OS CRISPR U2OS CVCL_0042)

Depositor [EMBL](#) (EMBL)

GMO Status [U2OS-CRISPR-SNAPf-Nup358/RanBP2](#) S1: [U2OS-CRISPR-SNAPf-Nup358/RanBP2](#) (U2OS-CRISPR-SNAPf-Nup358/RanBP2)

Protein expression

Protein expression Nup358/RanBP2, SNAPf-tag

Culture Medium

Culture Medium 5% FBS, 3.0 µg/ml insulin, 2.0 µg/ml transferrin, 2.2 µg/ml NaHCO₃ (DMEM)

Supplements 10% FBS, 3.0 µg/ml insulin, 2.0 µg/ml transferrin, 2.2 µg/ml NaHCO₃ (DMEM)

Dissociation Reagent Trypsin

Doubling time 24-36 hours

Subculturing 1:3 split ratio into PBS

Split ratio 1:3

Seeding density 1-3 × 10⁴ cells/cm²

Fluid renewal 2-3 days

Freeze medium DMEM + 10% DMSO + 10% FBS

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Thawing and Culturing Cells

1. Thaw the vial quickly in a 37°C water bath. Transfer the cells to a pre-warmed medium.
2. Centrifuge the cells at 300 x g for 3 minutes. Resuspend the cells in 100 µl of medium.
3. Seed the cells into a 96-well plate (37 wells) at a density of 100,000 cells per well.
4. Incubate the cells for 24 hours. Replace the medium with fresh medium containing 70% of the original medium.
5. Seed the cells into a 96-well plate (15 wells) at a density of 100,000 cells per well.
6. Incubate the cells for 24 hours. Replace the medium with fresh medium containing 30% of the original medium.
7. Seed the cells into a 96-well plate (10 wells) at a density of 100,000 cells per well.
8. Incubate the cells for 24 hours. Replace the medium with fresh medium containing 30% of the original medium.

Incubation Atmosphere

37 °C, 5% CO₂

Flask Coating

None

Freezing Procedure

Resuspend cells in 1 ml of freezing medium. Seed into a 96-well plate (78 wells) at a density of 100,000 cells per well.

Shipping Conditions

Cells are shipped in a dry ice container at -78 °C.

Storage Conditions

Store at -150 °C to -196 °C in liquid nitrogen.

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Sterility

Cells are tested for mycoplasma contamination using PCR. All cells are confirmed to be free of mycoplasma contamination.