Product sheet

IBRS-2 Cells | 305212

General information

Description	The IBRS-2 cell line is a porcine kidney epithelial cell line commonly used in virology and veterinary research. Derived from the kidney tissue of a domestic pig (Sus scrofa), these cells provide a valuable in vitro model for studying porcine viral infections, including foot-and-mouth disease virus (FMDV) and other enteric viruses that affect swine. Due to their epithelial origin, IBRS-2 cells are particularly suitable for studying virus-host interactions, viral replication, and the effects of antiviral compounds within porcine kidney tissues. IBRS-2 cells exhibit typical epithelial characteristics, such as the formation of tight junctions and the expression of specific markers associated with kidney epithelial cells. They have been employed extensively in studies focused on viral pathogenesis, vaccine development, and the screening of antiviral agents. The cell line is also useful in toxicology studies due to its origin in kidney tissue, providing insights into renal toxicity of various compounds. However, it is important to note that the IBRS-2 cell line is intended strictly for research use and not for any therapeutic or in vivo applications.
Organism	Pig
Tissue	Kidney
Synonyms	IB-RS2, IBRS2, Instituto Biologico-Rim Suino-2

Characteristics

Age	3 months
Gender	Female
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	IBRS-2 (Cytion catalog number 305212)
Biosafety level	1

Expression / Mutation

Handling

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Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
Split ratio	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

Handling of cryopreserved cultures

1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

Quality control / Genetic profile / HLA

Sterility

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.

To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.