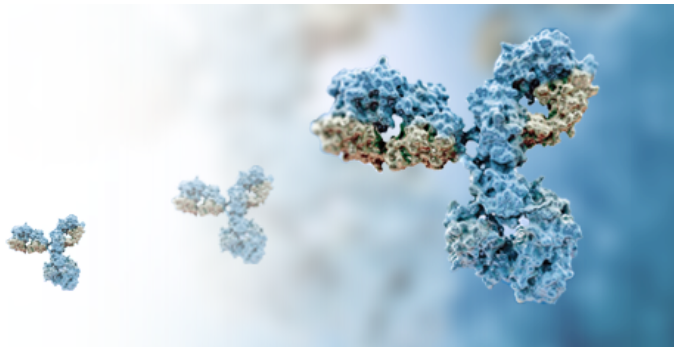

HEK293 - SYT7 (KO) Cell Line

Cat. No.: NTV-0925-YJ423
This product is for research use only and is not intended for diagnostic use.

Summary

Description	A HEK293 cell line with the SYT7 gene, which encodes Synaptotagmin-7, knocked out. This line is an important tool for studying calcium-dependent vesicle fusion, particularly in asynchronous neur otransmitter release and hormone secretion.
Species	Human
Size	1×10^6 cells
Growth Conditions	37°C with 5% CO_2
Related Disease	Bipolar disorder
Synonyms	HEK293 Synaptotagmin 7 Knockout cells; SYT7-deficient HEK293 cells; HEK293 SYT7-null cell li ne; HEK293 with SYT7 gene knockout; SYT7 KO 293 cells
Parental cells	HEK293
Format	Frozen
Shipping	Dry Ice
Storage	Store in liquid nitrogen.

Specifications

Mycoplasma Testing	Negative
Recovery of Frozen Cells	1. Preparation: Preheat a 37°C water bath and the complete culture medium. Pipette 6 mL of the pre-warmed med ium into a 15 mL conical tube and keep it ready. 2. Thawing:

For safety, first move the cryovial from liquid nitrogen to a -80°C freezer for 10 minutes. Then, rapi dly thaw the vial in the 37°C water bath by gently swirling it for under 1 minute until only a small ice crystal remains. Ensure the cap does not contact the water.

3. Aseptic Transfer and Dilution:
Inside a biosafety cabinet, sterilize the outside of the vial with 75% alcohol. Transfer the entire tha wed cell suspension into the prepared conical tube with medium. To maximize recovery, rinse the empty vial with 1 mL of medium and add it to the same tube.

4. Centrifugation:
Pellet the cells by centrifuging the suspension, typically at 1100 rpm for 4 minutes. (Note: Optimal speed and time are cell-type dependent).

5. Resuspension and Plating:
Carefully aspirate and discard the supernatant containing the cryoprotectant. Gently resuspend th e cell pellet in 1 mL of fresh complete medium. Transfer the cells to a T25 culture flask and add fre sh medium to a total volume of at least 6 mL.

6. Incubation:
Gently mix the cells in the flask to ensure even distribution and place it in a humidified incubator se t to 37°C and 5% CO_2.

7. Next-Day Care for Adherent Cells:
The following day, check for cell attachment. If attached, replace the old medium with fresh comple te medium. If cells are floating but appear viable (round and bright), wait another 24 hours before c hanging the medium. Afterwards, refresh the medium every 2-3 days and passage when confluenc e is over 80%.

8. Next-Day Care for Suspension Cells:
The following day, assess cell health. If viable, refresh the medium. For poor recovery, consider usi ng a smaller flask and a higher serum concentration (e.g., 20%). If cells still appear unhealthy after 72 hours, contact technical support for assistance.

Subculturing Procedure

1. Preparation
Preheat the complete culture medium, PBS, and trypsin-EDTA solution to 37°C.

2. Wash Cells
Aspirate and discard the old culture medium from the flask. Gently rinse the cell monolayer once w ith pre-warmed PBS (e.g., ~6 mL for a T25 flask), then discard the PBS.

3. Cell Detachment
Add enough trypsin-EDTA to cover the cell layer (e.g., ~3 mL for a T25 flask) and incubate at 37° C. Monitor under a microscope until about 70-80% of the cells become rounded, then gently tap th e flask to dislodge them.

4. Neutralize Trypsin
Quickly add at least a double volume of pre-warmed complete medium (e.g., 6 mL for a T25 flask) to the flask to inactivate the trypsin. Gently pipette the medium over the surface to ensure all cells are dislodged and suspended.

5. Collect and Pellet Cells
Transfer the entire cell suspension to a sterile conical tube. To maximize yield, you can rinse the fl ask with a small amount of PBS and add it to the tube. Centrifuge the suspension (e.g., 1100 rpm f or 4 minutes) to form a cell pellet.

	6. Resuspend and Seed Carefully discard the supernatant. Gently resuspend the cell pellet in a small volume of fresh comp lete medium. Add the resuspended cells to new culture flasks at your desired split ratio (a 1:3 ratio is recommended for the first passage). 7. Incubation Add the appropriate volume of fresh medium to the new flasks. Place them in a humidified incubat or at 37°C with 5% CO_2. Ensure proper gas exchange by either loosening the flask caps or using v ented caps. 8. Post-Passage Maintenance Check the cells the following day. If there is a significant number of floating dead cells, replace the medium. Continue to monitor cell growth and change the medium as needed, passaging again onc e the cells reach over 80% confluence.
Cryopreservation Medium	95% Complete Culture Medium with 5% DMSO
Research Use Only	For Research Use Only. Not For Clinical Use.

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