Applied StemCell, Inc.
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Datasheet

Substrate-free Autobioluminescent Cell Lines
Human Embryonic Kidney Cells (HEK293)

Product Information

Catalog Number	**ASE-5902**
Description	Applied StemCell, Inc.'s Autobioluminescent HEK293 cell line is a substrate-independent synthetic luciferase system that encodes all of the components required for bioluminescent signal initiation and maintenance. This immortalized cell line grows quickly and can be scaled for high throughput experimental designs. This is an ideal cell line for metabolic activity and toxicology screening.
Quantity	1 x 10^6 cells/ 1 mL
Cellular Morphology	Epithelial
Tissue	Embryonic kidney
Growth Properties	Adherent

Recommended Growth Medium

The following medium is recommended for cellular growth (not provided with cells)

Component	Vendor	Cat. Number	Final Conc.
HyClone™ Dulbecco's Modified Eagles Medium (DMEM)	GE Lifesciences	SH30284	
ES-Sure™ FBS	Applied StemCell	ASM-5017	10%
100 mM Sodium Pyruvate	Thermofisher	11360070	1 mM
HyClone™ Penicillin-Streptomycin 100X solution	GE Lifesciences	SV30010	1X
G 418 Sulfate, Sterile-Filtered Aqueous Solution	EMD Millipore	345812	100 µg/mL

Protocol

1. Thawing the Frozen Cells

1.1. Incubate the vial in a 37°C water bath with gentle agitation until the contents of the vial have thawed (thawing should occur in approximately 2 minutes). To reduce the possibility of contamination, do not submerge the O-ring or cap during the thawing process.

1.2. Spray the thawed vial with 70% ethanol and transfer to a sterilized environment. All remaining steps should be performed using aseptic techniques.

1.3. Transfer the full contents of the cryovial to a 15 mL conical tube containing 9 mL warmed (37°C) complete growth medium, and centrifuge at 125 x g for 7 minutes.

1.4. Resuspend the pellet in complete growth medium (warmed to 37°C) and transfer to an appropriate cell culture container.
Note: 25 cm^2 or 75 cm^2 flasks are recommended for initial thawing procedures.

1.5. Incubate the cells at 37°C and 5% CO_2 in a humidity controlled environment and monitor for growth.

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2. Routine Growth and Maintenance

2.1. Remove and discard spent culture medium.
2.2. Rinse cells with an appropriate volume of sterile, 37°C PBS.
2.3. Add an appropriate volume of Trypsin-EDTA solution to the flask and incubate until cells have detached (detachment usually occurs within 2 to 15 minutes depending on if the incubation is performed at room temperature or at 37°C).
2.4. Resuspend the detached cells in an appropriate amount of pre-incubated 37°C complete growth medium.
2.5. Aliquot cells into new culture vessels containing pre-incubated 37°C complete growth medium.
2.6. Incubate the cells at 37°C and 5% CO_2 in a humidity controlled environment.

Subcultivation ratio: It is recommended that cells be subcultured at a ratio between 1:3 and 1:10 as needed.

Medium Refreshment: It is recommended that medium be refreshed every 2-3 days as needed.

Precautions and Disclaimers

Safety Precaution

PLEASE READ BEFORE HANDLING ANY FROZEN VIALS. These cells should be treated as biosafety level 1. Please wear the appropriate Personal Protective Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling the cells. Handle the frozen vials with due caution. Please be aware that the following scenario may occur: Liquid nitrogen may leak into the vials when the vials are submerged in liquid nitrogen. Upon thawing, the liquid nitrogen returns to the gas phase, resulting in a dangerous build-up of pressure within the vial. This can result in the vial exploding and expelling not only the vial contents but also the vial cap and plastic fragments of the vial.

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